ALASKA MEDICINE

WHOSE WOODS THESE ARE I THINK I KNOW.

His house is in the village though;
He will not see me stopping here
To watch his woods fill up with snow.

My little horse must think it queer
To stop without a farmhouse near
Between the woods and frozen lake
The darkest evening of the year.

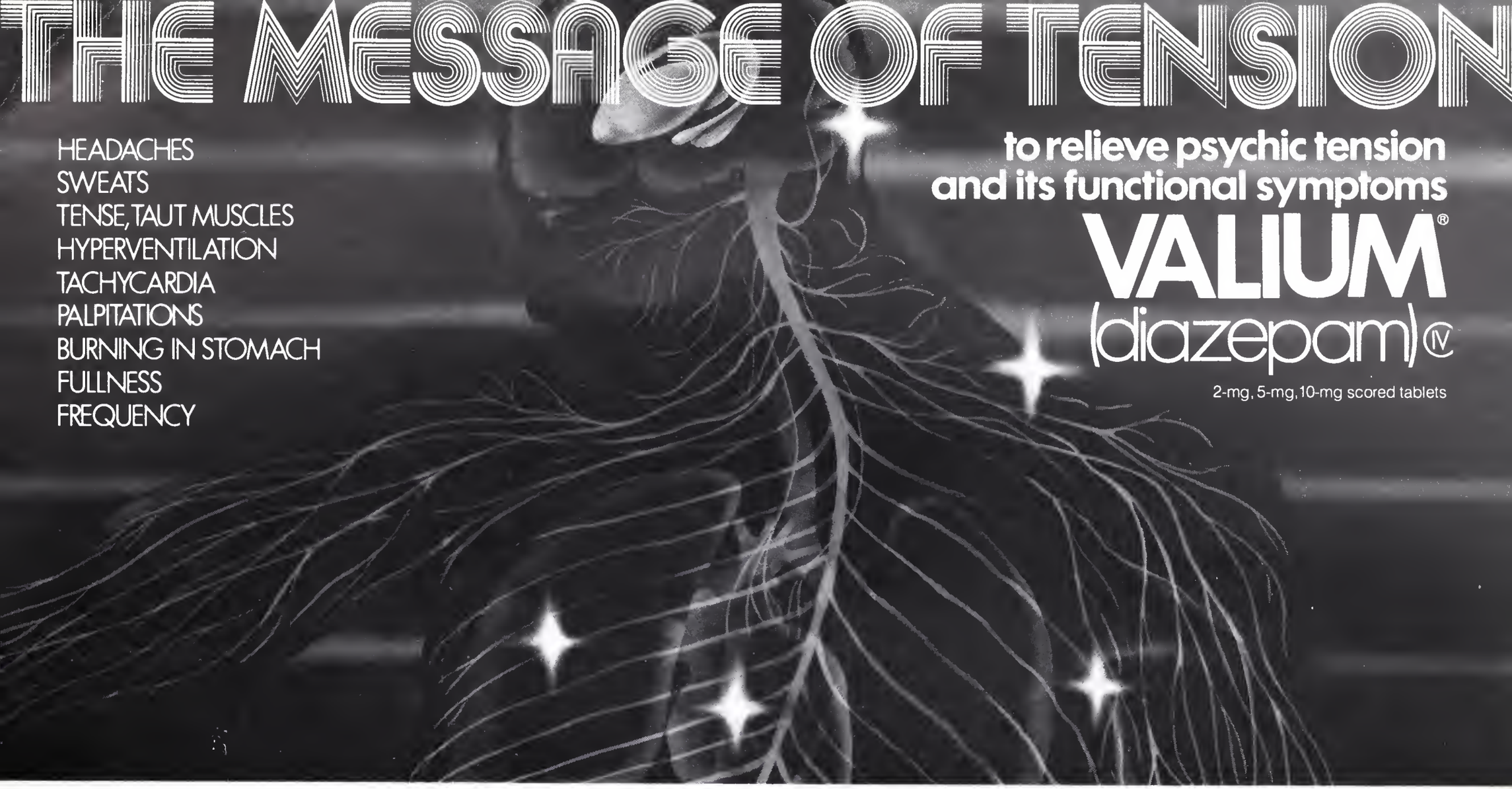
He gives his harness bells a shake
To ask if there is some mistake.
The only other sound's the sweep
Of easy wind and downy flake.

The woods are lovely, dark and deep,
But I have promises to keep,
And miles to go before I sleep,
And miles to go before I sleep.

Robert Frost

Volume 21, Number 1 January 1979

THE MESSAGE OF TENSION



HEADACHES
SWEATS
TENSE, TAUT MUSCLES
HYPERVENTILATION
TACHYCARDIA
PALPITATIONS
BURNING IN STOMACH
FULLNESS
FREQUENCY

to relieve psychic tension and its functional symptoms

VALIUM®
(diazepam)℞

2-mg, 5-mg, 10-mg scored tablets

VALIUM®(diazepam)

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).
The effectiveness of Valium in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habit [illegible]

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice, periodic blood counts and liver function tests advisable during long-term therapy.

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Nutley, New Jersey 07110

ALASKA MEDICINE

Official Journal of the Alaska State Medical Association

1135 Eighth Avenue, Suite 6, Anchorage, Alaska 99501

Volume 21 | January 1979 | Number 1

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NORTHERN PRINTING ANCHORAGE

STATUS OF MENTAL HEALTH FOR ALASKAN NATIVES

Theodore A. Mala, M.D.

Alaska! Land of mountains and rivers, wilderness and subsistance living, home of the last frontier. The State has been fantasised and romanticized by poet and scholar. The thought of the Eskimo living in harmony with nature, far apart from the cares of the world, has been a source of wonder to many. Some have dreamt of this life, others have come and tried the same lifestyle and others, feeling that they were "helping" the poor "uncivilized native", have launched a concerted effort to "modernize" the native and fit him into urban society.

The Eskimo, Indian and Aleut of Alaska were left to their own subsistance way of life until the coming of the Alaska Native Land Claims Act, closely followed by the Trans-Alaska Pipeline. Native people who led a relatively simple lifestyle were catapulted into the mainstream of society and expected to handle complex daily business transactions, establish corporations, write by-laws, deal with complicated legal and financial issues, and be subjected to countless "consultants" and entrepreneurs while retaining their tranquil state of mental health.

A grave number of other complexities continue to assault out people: Improved communications, thus making the world smaller; expanded transportation and availability of travel money; increased State population and tourism; and numbers of scientists and scholars covering every inch of our State in their quest to find, define, analyze and dissect traditions and lifestyles; Missionaries, both religious and political, bombarding our privacy through the mails, the air-ways, and even at our front doors; legislation thousands of miles away with which our people must live. That legislation, infringing on a tradition of subsistance living, passed on to us by our fathers, tells us that whale hunting and caribou taking are not legal.

What happens to the Alaska Native who reels incredulously at such sociological and psychological turnabouts in his life? When his children are taught through the media that their "primitive" manner is strange, that they have not kept up with the rest of the modern society and the way in which others have envisioned that their lifestyle should be? Children have been encouraged to sacrifice traditional foods that are "messy and difficult to prepare" for the easy, "modern", pre-packaged wonders of today's marketing industry. They have been taught to substitute items of higher cost and poorer nutrition for the sake of convenience and being "accepted" by urban society.

Much of the aforementioned has brought the Alaska Native to a new problem that reflects our times: The increase of leisure time. With the advent of more and more time saving devices, work and community seem to be played down. No longer do many have to go to the river and cut ice for drinking water - just turn on the faucet in your house. Time saved: around two hours, depending where you live. Housing projects abound. Pre-fabricated houses are continually brought northward and are assembled in the summer. Although many use much more oil to heat, they are certainly more modern than sod-houses. Many have come to the aboriginal homelands and have "analyzed the needs" returning with whatever that study resulted in whether the people were consulted or not. Thus the list continues; television, satellites, health systems, sewer systems, water

Alaska Federation of Natives, Anchorage, Alaska 99501 presented at the Northwest Mental Health Conference on Minority Groups, March 18-19, 1978 at Seattle, Washington, sponsored by the Western Interstate Commission for Higher Education (WICHE).

treatment plants, roads, housing, community colleges, Dairy Queens, Colonel Sanders, Coca Cola, Seven Up, et cetera, et cetera, et cetera, ad nausiam.

One such study resulted in an incredibly high cost construction of a water tank in one of our villages which was dedicated complete with senators and media coverage. After the dignitaries left, it was learned that the villagers continued to go to the river to get their drinking water because their new two hundred thousand dollar water tank complete with scientifically treated and purified water tasted "funny" and the local people did not like it.

A recent cross-cultural conference in Anchorage examined the question of what is "Mental Health", is it modified or changed when one takes traditional standards and attempts to apply them to different cultures and backgrounds? What examinations and standards loose their relavance when once removed from the culture in which they were conceived? For example, is an Arctic Eskimo child who has never left his home to be construed as mentally deficient or a slow learner if he cannot identify a picture as a horse or giraffe when he has never seen one? What would be the reaction if the same test were drawn up in the Arctic and given to state-wide examinees and they could not identify a drawing as a ptarmigan or walrus or sea lion or beluga whale?

With all of this in mind, I return to today's status of the Alaska Native and Mental Health. Our number one concern is alcoholism. We have found that, Alaska Natives (who comprise only 17% of the state) account for these statewide statistics: ---- 60% of the deaths due to alcoholism (over five times the non-Native rate); ---- 67% of all client admissions to State funded alcoholism programs; ---- 25% of the deaths due to cirrhosis of the liver; ---- 43% of all suicides; ---- 38% of all homicides; ---- 42% of all homicide arrests; ---- 44% of all aggravated assault arrests; ---- 31% of arrests for forcible rape; ---- violent death rates almost greater than for non-Natives. Using current Indian Health Service guidelines for treating alcoholism, we would need over one hundred additional beds for acute medical detoxification alone. This is a conservative figure, based on the assumption that prevalence of problem drinkers among Alaska Natives is equal to the prevalence of problem drinkers among non—Natives. As the statistics that I have just quoted reveal, the prevalence of death rates and social indicators show that ours is three to five times greater than non—Native rates. This could imply that our needs might be three to five hundred beds more for acute detox.

In the area of suicide, attempts have risen since previous years to a present rate of 212.5/100,000 population. In comparsion with Los Angeles which has a rate of 150 attempts/100,000, we see 1,000 in the Native population of Anchorage and 1,450/100,000 in rural Alaska Native towns.[2] In the Alaska Psychiatric Institute, we find that this past year out of a total of 661 admissions, 476 caucasians or 152/100,000 were admitted versus 185 Alaska Natives or 295/100,000 persons rate.[3] Graphically, the Alaska Native shows a high upward swing in suicide deaths over the American Indian, the United States and the Alaska non-Native. Alcohol death rates also are in an upward swing especially since 1965-69 period. Of the leading causes of death among Alaskan Natives since 1970, accidents rate number one, alcoholism, number five, suicide, number eight, and homicide, number nine. Alcoholism quickly followed heart disease, malignant neoplasms, influenza and pneumonia. A conclusive study commissioned by th Alaskan Federation of Natives by Dr. Robert Kraus (unpublished, in preparation by the University of Alaska), clearly indicates that the patterns of mental illness, alcohol abuse and other substance abuse are on the uprise among Alaska Natives.

Dr. Kraus' report on mantal health and the Alaska Native again re-emphasizes that formerly the Alaska Native lived his life within a timeless, consistent and supportive organization of human associations. The intimate traditional associations centering on family, kin, faith and locality and the small, tightly woven networks of informal personal relationships which formed the basis for social, religious, and economic and political order were organizing principles of life and were a source of support that could always be relied upon. As a Native woman describes it: "I love to go home to my village because I know that each person in their heart is holding hands with all the others all the time."

"For many Native Alaskans, and especially the young, the breakdown of the organized, consistent and traditional relationships due to the pressures from outside, has resulted in a reduced ability to find and hold a position of psychological integrity and centrality. Loneliness, anxiety, frustration, continuing stress, and at times, despair characterize the lives of many Native Alaskans today. In the Western Medical System, these people come to be called mentally ill or alcoholic."[4]

Where are the answers? Certainly not all in one place. The community mental health centers are fulfilling a much needed role in our state. Cross cultural work-shops and seminars in terms of educating staff are essential. Consortia or groups of individuals working together for a common cause are needed. How many

times do we see efforts duplicated by many small groups that easily could bann together and form a united front against alcoholism and other areas of need within mental health. Education is a priority. I believe that our people are ill-prepared in many areas of mental health education and prevention.

Mental health for the Alaska Native is in a delicate balance. There is no one program that could possibly hope to mean all things to all men. There are different levels of sophistication in Alaska Natives, just as there are different individuals. It is only in considering the Alaska Native's personal background an individual life experience, that we can begin to see and treat him as a whole person.

I cannot stress enough, in discussing various methods of therapy, that he or she, Alaska Native, or any other minority or non-minority, the overall principle holds true: Every call for help, regardless of the assessment of the interviewer, is an emergency. A human being, reaching out to another human being, must be treated with the dignity and respect he deserves as a person. How many drug overdoses and suicides could have been prevented if only a counselor could have thought of his clients not as "cases" but as fellow human beings, in trouble, reaching out for help?

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2. Patterns of Mental Illness, Alcohol Abuse, & Drug Abuse Among Alaska Natives, Robert Kraus, M.D., prepared for the Alaska Federation of Natives, Inc., 1977 (to be published shortly), p. 65
3. same as ref. 1, p. 67
4. Kraus Report, p. 21

'Take It Easy' Is Snow Shoveling Rule

Snow Leads To Hazards

The winter snows are here again, and millions of householders are faced once more with clearing walks and driveways.

Snow shoveling requires a lot of energy and muscle. Pushing a stalled auto out of a drift is even more demanding.

Once again the American Medical Association reminds men of middle age and beyond, especially those who are overweight and lead sedentary lives, to take it easy in clearing away the snow from walks and drives.

If you're in good health, snow shoveling actually is good exercise—if you take it easy. This could mean getting up half an hour earlier on the morning of a fresh snow fall, to allow time for leisurely shoveling, with frequent brief rest periods. The frantic, hurried approach to clearing the drive in an effort to get to work on time most definitely is not good for health.

Most common serious health result of overexertion from snow shoveling is a heart attack. If your heart is sound, it likely won't be damaged. But if you already are prone to a heart attack, the extra exertion can trigger it.

Unless you have had a recent checkup, however, you cannot be certain you aren't a likely candidate for heart trouble. Take it easy. Don't be ashamed to invest in a machine that blows or scrapes aside the snow, with a small engine substituting for muscle power. Or hire the neighborhood lad down the street to shovel your walks.

Snow shoveling can be good for you, if you use common sense. Exercise and fresh air in the winter are important to maintaining health. Just don't overdo it.

December, 1978

Frank Chappell
Science News Editor
AMA

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    - Receive a 75% Premium Reduction if they practice less than ten (10) hours (one day) per week.
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MAFE ANOR
OR
IF YOU AIN'T GOT GRAMMER
(Even if you have a grandpa) DON'T WRITE

Milo H. Fritz, M.D.

Today, when the English language is being bastardized, bludgeoned, and homogenized to death through the gargled and written word, be of good cheer. Help is at hand. Assistance can be offered to users of the same.

Fully recognizing that my own feet of clay reach clear up to my mastoid processes I offer the following freely and with the most generous intentions possible to be used in the cause of clear and spritely speech and writing.

Here are examples of current usage and beneath what I consider to be more graceful and economical ways of keeping the readers or listeners interest (if not at fever pitch) at least warm enough to prevent the onset of rigor mortis:

Today gaskets are in short supply.

Today gaskets are scarce.

Let us provide him or her with glasses that remain positioned before the eyes.

Let us provide mafe (1) with glasses that remain positioned before the eyes.

This will entertain listeners and/or readers of all ages and all 3 sexes.

This will entertain listeners anor (2) readers of all ages and the 3 sexes.

Widgets are now in plentiful supply.

Widgets are now plentiful.

At this point in time it can be told.

Now it can be told.

On February 30th it can be told.

The FDA published guidelines for small businesses.

The FDA published rules for small businesses.

When you mean rules, say rules. A rose by any other name stinks.

More importantly, the knowledge of weather along the proposed route is an asset in preflight planning.

It is more important to know about the weather along the proposed route, an asset in preflight planning.

Continuous use of sulphonamides is a preventative in the treatment of rheumatic hart disease.

Sixteen graduates of a liberal arts college and one PhD. in English literature caught the misspelling of heart but missed the use of the non-word preventative instead of preventive. The captain of a super-tanker and an able seaman off the same ship spotted the errors immediately. If such ignorance in these enlightened times is so prevalent can a resurgence of the dark ages be far behind?

We offered a prize of a trip to Pitcairn Island and return for two plus 10 magical days at the Pitcairn Hilton to the first person who phoned in the correct revision of:

Irregardless of the weather, the flight ain't going to be cancelled.

The first 17 phone calls offered the following,

"Irregardless of weather the flight will not be cancelled."

Milo H. Fritz, M.D., Box 158, Anchor Point, Alaska 99556.

(1) Mafe is a neologism, a great improvement over the nauseating him or her, himself or herself, his or hers. It is derived from the words male and female and is not copyright.

(2) Anor is a neologism and a substitute for the cumbersome and/or.

Number 18 detected the fatal flaw,

> "Irrespective of weather the flight ain't going to be cancelled."**

The use of the suffix 'wise' tacked on to any noun would make Shakespeare wonder whether it was all worthwhile.

> Schoolwise the budget is unbalanced.
>
> Under the item 'schools', the budget is unbalanced.

> General Patton, the then commander of the XXI Corps, had to use broomsticks in place of rifles for drill.
>
> General Patton, then commander of the 21st Corps, had to use broomsticks instead of rifles for drill.

Another nauseating newcomer on the language scene is the "indepth" study. Isn't it better to say a profound study, or a complete study, instead? Those who are too young to recall the word patient, now must put up with "the consumer of medical care."

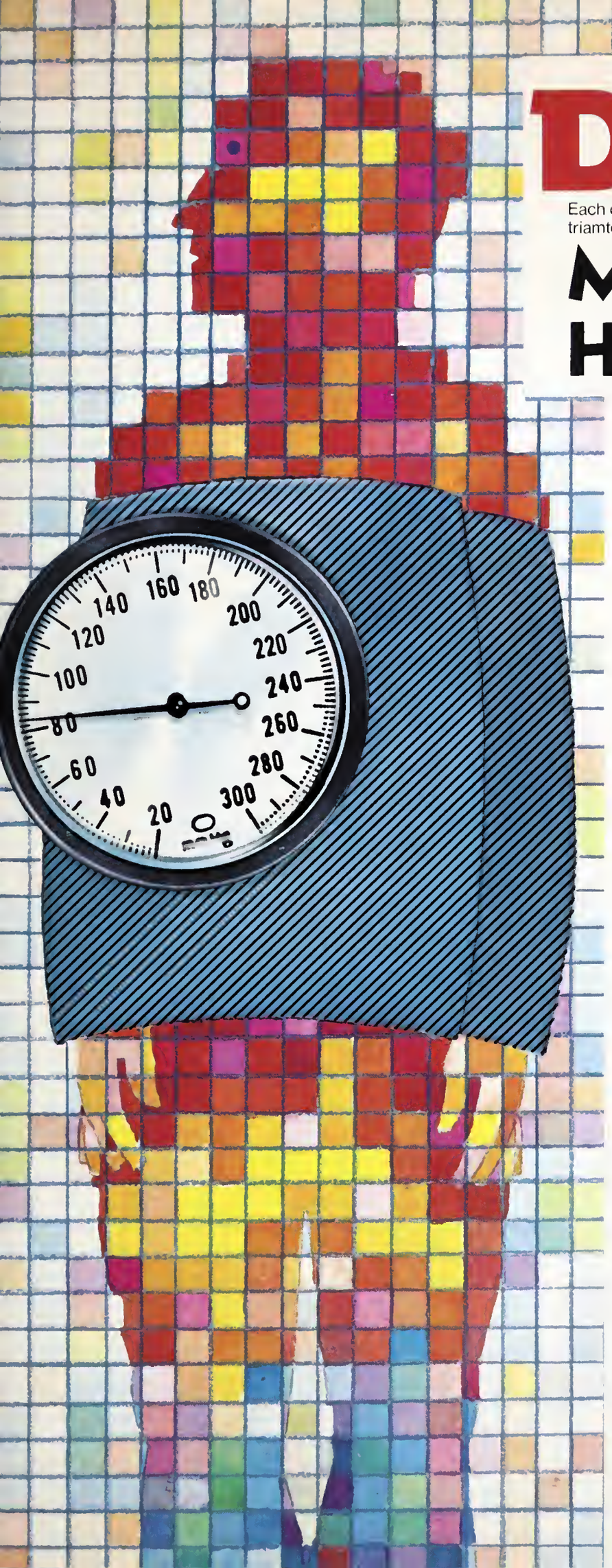
We used to have doctors, nurses, pharmacists, dieticians, psychologists and physiotherapists. Now we have "health care providers" and Mr. Califano.

> An ongoing study has provided additional clues.
>
> A continuing study has provided additional clues.

Ongoing, while perfectly correct, is beaten to death by overusage. Cliches, nonwords and verbosity detract from the meaning and spriteliness of the English language. The dictionary, a theaurus, a book of synonyms and Bartlett's quotations can do much to clean up the language of those who wish to inform, anor entertain by means of the written and spoken word. Reguardless of mafe education anyone can learn to write and speak clearly and entertainingly.

I thought that the meaningless cliche of the 1930's in North Carolina "hurry back" plumbed the depths of banality. I could envision hundreds of thousands of people rushing back to the supermarket, pet shops, mortuaries and gas stations. But never underestimate the power of the media. Nationwide we plumb the depths of banal meaninglessness with "have a good day!" The same to you.

**Sadaharu Kamura, an exchange English scholar from Kyoto University and his bride Bamby Anne left Papeete for Pitcairn Island by raft on February 26, 1977.



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Makes Sense in Hypertension*

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* **Warning**
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K+ frequently, both can cause K+ retention and elevated serum K+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

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10 mg. capsules, 20 mg. tablets,
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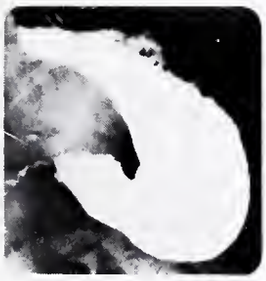
helps control abnormal motor activity with minimal anticholinergic side effects†

Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.

Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating certain functional G.I. disorders.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

Merrell

8-3497 (Y515A)

Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection
AVAILABLE ONLY ON PRESCRIPTION.

Brief Summary
INOICATIONS
For use as adjunctive therapy in the treatment of peptic ulcer.
IT SHOULO BE NOTEO AT THIS POINT IN TIME THAT THERE IS A LACK OF CONCURRENCE AS TO THE VALUE OF ANTICHOLINERGICS/ANTISPASMOOICS IN THE TREATMENT OF GASTRIC ULCER. IT HAS NOT BEEN SHOWN CONCLUSIVELY WHETHER ANTICHOLINERGIC/ANTISPASMOOIC ORUGS AIO IN THE HEALING OF A PEPTIC ULCER, OECREASE THE RATE OF RECURRENCES, OR PREVENT COMPLICATION.

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FOA has classified the following indications as "probably" effective.

May also be useful in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, acute enterocolitis, and functional gastrointestinal disorders); and in neurogenic bowel disturbances (including the splenic flexure syndrome and neurogenic colon).

THESE FUNCTIONAL OISOROERS ARE OFTEN RELIEVEO BY VARYING COMBINATIONS OF SEOATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINOICATIONS: Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis, toxic megacolon complicating ulcerative colitis; myasthenia gravis. WARNINGS. In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. PRECAUTIONS. Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with autonomic neuropathy; hepatic or renal disease; ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon, hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension, hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.
It should be noted that the use of anticholinergic/antispasmodic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis). Oo not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. AOVERSE REACTIONS: Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia, urinary hesitancy and retention, blurred vision and tachycardia, palpitations; mydriasis; cycloplegia, increased ocular tension, loss of taste; headache; nervousness, drowsiness; weakness; dizziness, insomnia, nausea; vomiting, impotence, suppression of lactation, constipation; bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. OOSAGE ANO AOMINISTRATION. Oosage must be adjusted to individual patient's needs.
Usual Dosage. Bentyl 10 mg. capsule and syrup: *Adults*. 1 or 2 capsules or teaspoonfuls syrup three or four times daily. *Children*. 1 capsule or teaspoonful syrup three or four times daily. *Infants*. ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg. *Adults*. 1 tablet three or four times daily. Bentyl Injection. *Adults*. 2 ml. (20 mg.) every four to six hours intramuscularly only. NOT FOR INTRAVENOUS USE. MANAGEMENT OF OVEROOSE: The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanecol chloride USP) should be used.
Product Information as of October, 1976

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This Limited Partnership has acquired an unimproved 14.46 acre tract of R-3 zoned real property located on Reka Drive, Anchorage, Alaska. The General Partners intend to develop the parcel into 4 - plex apartment and condomimium sites. Funds raised in excess of the minimum offering will be utilized to pay development costs.

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And by the officers and directors of Professional Land Development Corporation:

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Copies of the Offering Circular may be obtained from any of the above at the address below or call 279-8551.

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AM 1-79

X—RAY MACHINE REGISTRATION NOTICE

The Department of Health and Social Services will be conducting a state-wide registration of X-ray equipment beginning February 1, 1979 in accordance with the requirements of 18 AAC 85-Radiation Protection.

Machines subject to registration are those capable of producing X-radiation, regardless of use. This includes all fluoroscopic and radiographic medical units as well as those used for therapy. Devices which produce microwaves, radiowaves, ultraviolet, infrared and laser radiation are not subject to registration.

X-ray machines are to be registered on forms provided by the Department of Health and Social Services. Registration forms (one for each X-ray machine) and instructions will be mailed to all known and potential users of radiation during the month of January. If forms are not received by the middle of February or an adequate number of forms is not provided with the original mailing, owners of such equipment should contact the Department of Health and Social Services, Radiological Health Program, Pouch H-06F, Juneau. Notification should be provided at that time as to how many forms will be needed.

Careful reading of instructions will result in proper registration and should only take a few minutes per X-ray unit to accomplish. Your cooperation and assistance will be appreciated.

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PHENCYCLIDINE: THE NEW GREAT MIMIC

Johnny B. Green

Verner Stillner, M.D. MPH

The abuse of phencyclidine is now considered to be the fasted growing drug problem in the United States.[1] Known on the street as "PCP", "Angel Dust", "Hog", "Rocket Fuel", "Superweed", "Supergrass", and "Elephant Tranquilizer", the drug is a special problem in pediatric and adolescent populations since the average age of the first time PCP user is reported to be 14 years.[2] It is further complicated by the frequent deceptive sale of PCP as other more popular street drugs such as mescaline, tetrahydrocannabinol (THC), lysergic acid (LSD), or amphetamines. The purpose of this paper will be to review the history, epidemiology, pharmacology, diagnosis, and treatment of PCP in the literature.

History

Phencyclidine was produced in 1957 and briefly marketed as a dissociative anesthetic[3] by Parke-Davis Company. Due to undesirable side effects, such as agitation, disorientation, delirium, and hallucinations, Parke-Davis terminated all human investigations in 1965.[4] Since that time phencyclidine has been legally available only as an animal tranquilizer.[3]

Phencyclidine first appeared on the street in the late 60's, but quickly lost popularity because of the unpredictable and undesirable effects.[5] The prevalence today results from its mind altering properties and simple chemical synthesis from inexpensive precursors easily obtained from chemical supply outlets.[1,2,3]

Epidemiology

In spite of PCP's notoriety, it is a preferred drug by many, and a common component of polydrug abuse.[6] According to counsellors in San Francisco's Project Eden, Inc., the average user is an adolescent, white male unemployed high school graduate who has been in jail. Often he has a poor self-image and difficulty with family and peer group relationships. He usually uses PCP with friends, but does see his use as a problem.[7]

The use of PCP has become commonplace among high school students in many areas, and has spread to all socio-economic levels.[2,5] Many who present to emergency rooms due to PCP have been performing well at work or in school.

The drug may be ingested, inhaled, injected or insufflated ("snorted"). The most common route is via smoking "dusted" marijuana or parsley. Dosages are poorly controlled due to the practice of sharing a "joint", and the extreme variability (0.4 to 100%) in purity of the white powder.[5]

The frequent deceptive substitution of PCP for other drugs occasionally leads to unsuspected phencyclidine intake. The Pharm Chem Research Foundation analyzed 224 samples of phencyclidine between 1973-74, of which only 53% had been sold as PCP.[5]

Pharmacology

Phencyclidine (1-(1-phencyclohexyl) piperidine) has an excretion half life of about eleven hours[8,9] and is highly lipid soluble. The basic pKa (between 8.6 and 9.4) produces ionization in acidic fluids, rendering the compound less able to cross biologic membranes, and increasing the excretion in gastric fluids and urine.[10] Phencyclidine is metabolized in the liver to non-active mono-hydroxy derivatives. The drug and its metabolites are excreted in the urine.

Goodman and Gilman classify phencyclidine as a dissociative anesthetic. In small doses it has analgesic and anesthetic properties. Larger doses have produced convulsant, psychotogenic, and depressant effects.[6] Competitive inhibition of pseudocholinesterase may

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prolong the paralyzing effects of succinylcholine in surgery.[12]

Phencyclidine has been found to aggravate pre-existing psychopathology much more than LSD or mescaline. It more closely approximates the symptoms of schizophrenia than LSD,[5] producing an even greater rate of flashbacks.[4]

Clinical Presentation

Emergency room presentations of phencyclidine intoxication rival syphillis and hysteria as "the great mimic". Signs and symptoms are related to dose and route of administration.[13] Chief behavioral manifestations have ranged from "attacking everyone in sight" to "mute posturing".[14]

Smoking phencyclidine dusted joints is the most common route of intake, usually producing effects in two to three minutes and thereby limiting dosage levels. Due to an anterograde amnesic effect, third parties should be questioned about possible PCP ingestion. Mental status examination will show orientation to person and place, but time may be off by days or weeks. Distortions of body image, depersonalization, persistent auditory and visual hallucinations and paranoid ideation are common. Bizarre or violent behavior may present a danger to both self and others. Ataxia, slurred speech, analgesia, paresthesia and increased deep tendon reflexes are common on neurologic examination, often with clonus, tremors and weakness.[3,12,15]

Physical examination of these patients may reveal hypertension (systolic over 150, diastolic over 100) and increased pulse. Respiration is normal. Temperature is normal or slightly elevated, but lethal fevers have been reported. Horizontal and vertical nystagmus are present. Corneal and pupillary reflexes are decreased, without mydriasis.[3,5,12,13]

With increased doses, usually associated with oral or intravenous intake, neurologic signs increase in severity. Respiration and deep tendon reflexes may be decreased. Catalepsy, dystonias, opisthotonic posturing, convulsions, stupor and coma can result. Salivary and bronchial secretions may increase dangerously. Pharyngeal and laryngeal reflexes remain intact.[3,12,13,14]

Differential Diagnosis

Behavioral

The behavioral effects of phencyclidine should be distinguished from those of schizophrenia on the basis of history and presenting neurologic signs. PCP psychosis presents acutely in self-sufficient individuals without prior psychiatric history. Ataxia and slurred speech are not commonly seen in schizophrenia but should be expected early in phencyclidine intoxication.[3]

Physical

Stuporous or comatose patients can be diagnosed on the basis of presenting signs and electroencephalographic findings. The absence of mydriasis and presence of nystagmus reliably distinguish phencyclidine overdose from central nervous system stimulants of LSD. Systolic and diastolic hypertension, increased deep tendon reflexes, and minimally depressed respiration separate PCP induced coma from that of sedative-hypnotics.[3]

Electroencephalographic findings are specific and diagnostic.[3,15] Diffuse slowing with continuous almost sinusoidal theta activity, interrupted at about four second intervals by slow wave discharges are seen acutely. The theta activity is unresponsive to photic, auditory and tactile stimuli, as well as deep pain and eye opening. With improvement the slow wave desynchronization[5] becomes less frequent and less periodic.[15]

Therapy

There is no specific antagonist for phencyclidine. Treatment is therefore supportive and symptomatic.[16]

Neuropsychiatric

Patients in confused, agitated, or aggressive states require a quiet environment, with close, but discrete, monitoring to avoid injury to self and others. "Talk down", as employed with LSD overdose, exacerbates the agitation and should not be attempted. Consistency of staffing assignments may reduce agitation at medication and meal times. Benzodiazepenes may be helpful.[2,3,9,12,14,15,21]

Frankly psychotic patients should receive neuroleptics. Luisada,[14] having treated over 100 cases of PCP psychosis, recommends using phenothiazines (chlorpromazine), for the antipsychotic and sedating effects. Simultaneous abuse of anticholinergic drugs must be ruled out, and cardiovascular status must be monitored to avoid hypotension secondary to parenteral chlorpromazine. Haloperidol (Haldol) and diazepam (Valium) together may be used to treat the psychosis and agitation with decreased risk of hypotension.[3]

Medical

Stuporous or comatose patients are subject to a number of potentially lethal complications and may require intensive therapy. Pulse, blood pressure, temperature, urine output and respiration should be carefully monitored throughout the intoxication. Increased salivary

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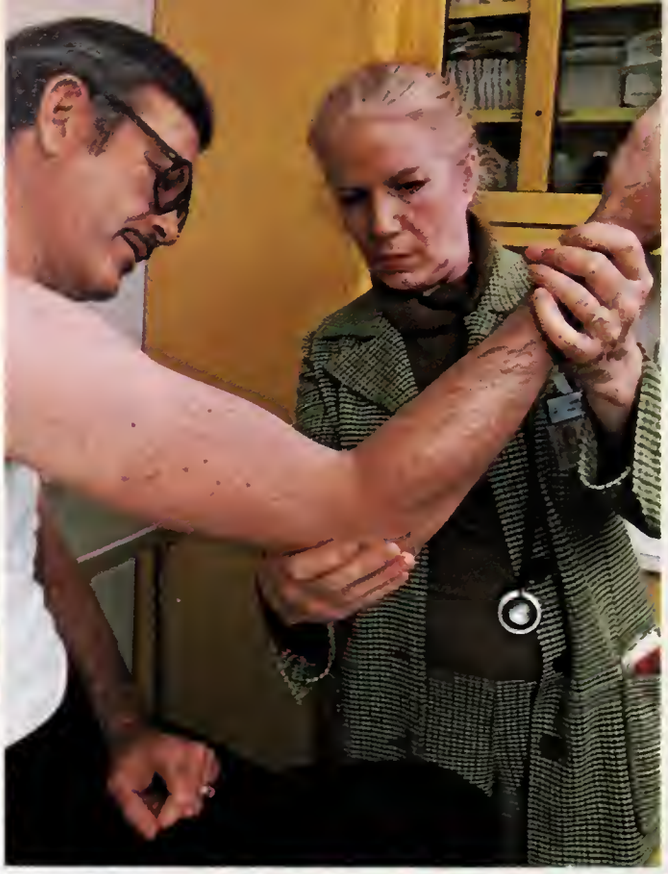
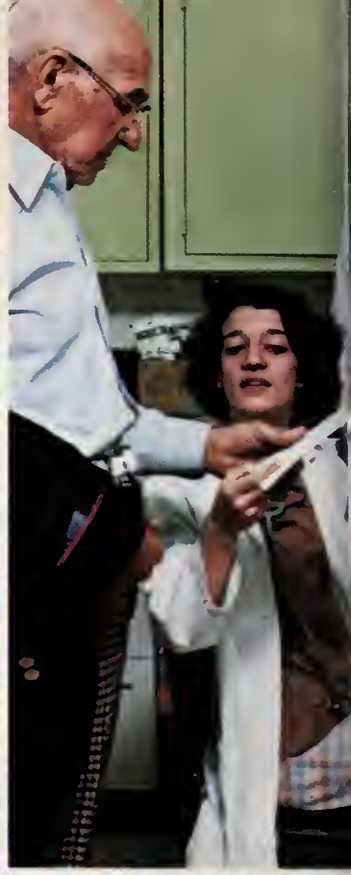




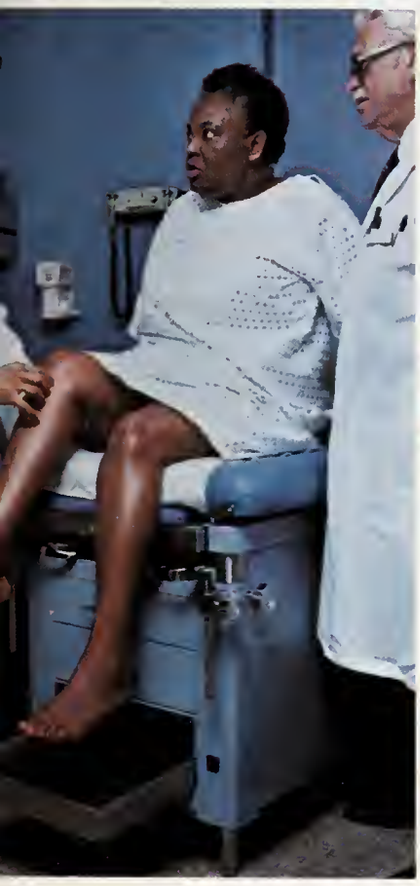
The evidence of experience

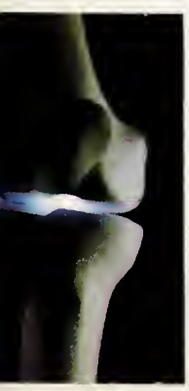
Since October 1974 when Motrin® (ibuprofen) was introduced in the United States, it has been used by more than 6,000,000 patients with rheumatoid arthritis* or osteoarthritis. Rarely has an ethical pharmaceutical product been prescribed for so many patients in so short a time. In addition, more than 450 studies presenting new data related to Motrin have been published.

The 6,000,000 patients already treated with Motrin is an objective measure of physicians' confidence in the ability of Motrin to relieve the pain and inflammation associated with rheumatoid arthritis and osteoarthritis.

So it is not surprising that in this short period Motrin has become the most frequently prescribed alternative to aspirin. Motrin relieves joint pain and inflammation as effectively as indomethacin or aspirin, but causes significantly fewer CNS and milder GI reactions. However, gastrointestinal bleeding, sometimes severe, has been associated with Motrin, aspirin, indomethacin, and other nonsteroidal antiarthritic agents.

*The safety and effectiveness of Motrin have not been established in patients with Functional Class IV rheumatoid arthritis (incapacitated, largely or wholly bedridden, or confined to wheelchair; little or no self-care).





Motrin 400 mg TABLETS
ibuprofen, Upjohn

The confidence that comes from experience—one more reason to prescribe Motrin.

Please turn page for a brief summary of prescribing information.

Upjohn The Upjohn Company, Kalamazoo, Michigan 49001

6857-4

The confidence that comes from experience—
one more reason to prescribe

Motrin 400 mg TABLETS
ibuprofen, Upjohn

Indications and Usage: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

Contraindications: Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

Warnings: Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

Drug interactions. *Aspirin* used concomitantly may decrease Motrin blood levels. *Coumarin:* Bleeding has been reported in patients taking Motrin and coumarin.

Pregnancy and nursing mothers: Motrin should not be taken during pregnancy or by nursing mothers.

Adverse Reactions

Incidence greater than 1%

Gastrointestinal: The most frequent type of adverse reaction occurring with Motrin (ibuprofen) is gastrointestinal (4% to 16%). This includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness*, headache, nervousness. **Dermatologic:** Rash* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

Incidence: Unmarked 1% to 3%; *3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

Overdosage: In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

Dosage and Administration: Suggested dosage is 300 or 400 mg t.i.d. or q.i.d. Do not exceed 2400 mg per day.

How Supplied

Motrin Tablets, 300 mg (white)	
Bottles of 60	NDC 0009-0733-01
Bottles of 500	NDC 0009-0733-02
Motrin Tablets, 400 mg (orange)	
Bottles of 60	NDC 0009-0750-01
Bottles of 500	NDC 0009-0750-02
Unit-dose package of 100	NDC 0009-0750-06
Unit of Use bottles of 120	NDC 0009-0750-26

Caution: Federal law prohibits dispensing without prescription.

NIM-3

Upjohn The Upjohn Company
Kalamazoo, Michigan 49001

and bronchial secretions, and decreased respiration may make respiratory assistance and tracheal suctioning necessary. Intact pharyngeal and laryngeal reflexes, with the possibility of laryngospasm, may make endotracheal intubation difficult and therefore a paralytic agent may be needed.

Gastric lavage followed by an "ion-trapping" regimen should be undertaken to increase phencyclidine excretion in toxic patients.[10] Lowering urinary pH below 5.0 will increase excretion more than 200 times. Solutions of 1 to 2% ammonium chloride, given intravenously or via nasogastric tube, can be successfully and safely used for this purpose.[6] Intravenous ascorbic acid is given adjunctively. When urine pH has been lowered to 5.0 furosemide and adequate fluids should be administered, to maintain a high urinary output.[6] Nasogastric suctioning should be continued for two to four days, after which cranberry juice and ascorbic acid may be used to prolong urine acidity.[10] Salicylates and phenobarbital are the only commonly occuring drugs whose excretion is adversely effected by this regimen.[10]

Hypertension is a serious problem, and has lead to intracerebral hemorrhage and death. Dangerous increases have occurred several days into recovery, and after dropping to normal levels. Treatment with antihypertensives (diazoxide, hydralazine) or alpha adrenegic blocking agents has been successful.

Convulsions and muscle spasms treated with restraints induce prolonged isometric contractions which can lead to rhabdomyolysis and myoglobinuric renal failure. Treatment of the convulsions with diazepam or diphenylhydantoin combined with a peripheral motore paralytic agent is preferred.[17]

Prognosis

The hospital course and duration of psychosis is related to the admission mental status and duration of the presenting mental state.[3] Patients presenting with confusion and agitation alone usually return to normal neurologic and behavioral status within eight hours, and may be discharged within twenty-four hours. Those patients presenting in a stuporous or comatose state lasting less than four hours usually continue in a confused or delirious state for one to two days, and exhibit a normal neurological and mental state in about three days. If the initial stupor or coma persists longer than six hours a prolonged psychotic state requiring about two weeks of hospitalization can be expected.

The prolonged PCP psychosis progresses through three distinct phases of about five days each. The first phase is characterized by violent psychotic behavior. During the second five days the behavior becomes more controlled but remains unpredictable. Restlessness continues on into the third phase which shows a rapid reintegration of personality and improvement of thought disorders and paranoia.[14]

Comments and Conclusions

Phencyclidine has become a major part of the drug abuse picture in the United States. In 1976 it was the leading cause of inpatient psychiatric admissions to St. Elizabeth's Hospital, Washington D.C. [14] PCP has been implicated in countless emergency room visits, and in numerous suicides, homicides, and accidental deaths.[3,4,5,17,18,19]

Antero grade amnesia makes the history of PCP ingestion difficult to obtain from the patient and third parties should be questioned when possible. Urine samples should be collected at the earliest time for analysis via gas-liquid chromatography. Agitated, confused, or aggressive patients suspected of having ingested phencyclidine should be placed in a quiet environment and treated with diazepam (Valium). Grossly psychotic patients should receive neuroleptics (haloperidol, chlorpromazine). Vital signs should be carefully monitored, hypertension treated with diazoxide. Respiratory assistance should be available for stuporus or comatose patients. Gastric lavage and an ion-trapping regimen should be instituted. Convulsions should be treated with diazepam or diphenylhydantoin.

The young age group using phencyclidine and its severe toxicity makes it necessary that each pediatrician, family practioner and emergency room physician become familiar with this potentially dangerous, and increasingly popular drug. The prevalence of PCP in Alaska has not been formally established. However, reports of its use and dangerous sequellae have dramatically increased during the last six months in both urban and bush communities.

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Cold Cures Elusive

Colds and other upper respiratory tract illnesses probably cause more discomfort and time lost from work or school than any other American health problem.

A cold is caused by one or more of many viruses, the American Medical Association reminds. Actually, grandma's remedy is still good. If you get a cold, stay home in bed. Keep warm. Gargle with warm salt water to ease a sore throat. Take a mild pain reliever for the discomfort.

None of this will cure the cold, but it will make you feel somewhat more comfortable while your body's natural defense mechanisms are building up enough steam to overcome the virus.

In some circles in recent years, massive doses of Vitamin C have been advanced as therapy or preventive for the cold. Physicians everywhere hoped it would work, but scientific studies thus far have failed to prove the usefulness of Vitamin C for colds.

Most of us have a cold or two during the course of the winter. Usually we try to keep going to the office, but sometimes we feel too bad to work, and spend a day or two at home.

There are medications now available — antihistamines, pain relievers, cough suppressants, and fever reducers — that can make the symptoms of a cold much less severe. These have their limitations and their problems. Antihistamines can cause drowsiness, which can be highly dangerous when driving an auto. If you get a cold, ask your doctor about the medications that reduce runny nose and sneezing and coughing.

As youngsters heard the old folks say: Treat a cold and cure it in two weeks; let it alone and it will go away in a fortnight. The time element isn't that exact, but the theory is the same.

December, 1978

Frank Chappell
Science News Editor
AMA

ROCHE

For recurrent attacks of urinary tract infection in women

Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

Just one tablet b.i.d. for 10 to 14 days

- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice
- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register,* 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

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Nutley, New Jersey 07110

Please see back cover.

Her next attack of cystitis may require

the Bactrim™ 3-system counterattack

ROCHE

Bactrim has shown high clinical effectiveness in recurrent cystitis as a result of its wide spectrum and distinctive antimicrobial action in the urinary, vaginal and lower intestinal tracts.

The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Enterobacteriaceae* in the bowel without the emergence of resistant organisms. Thus, Bactrim reduces the risk of introital colonization by fecal uropathogens. It has *no* significant effect on other normal, necessary intestinal flora.

Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Please see reverse side for summary of product information.

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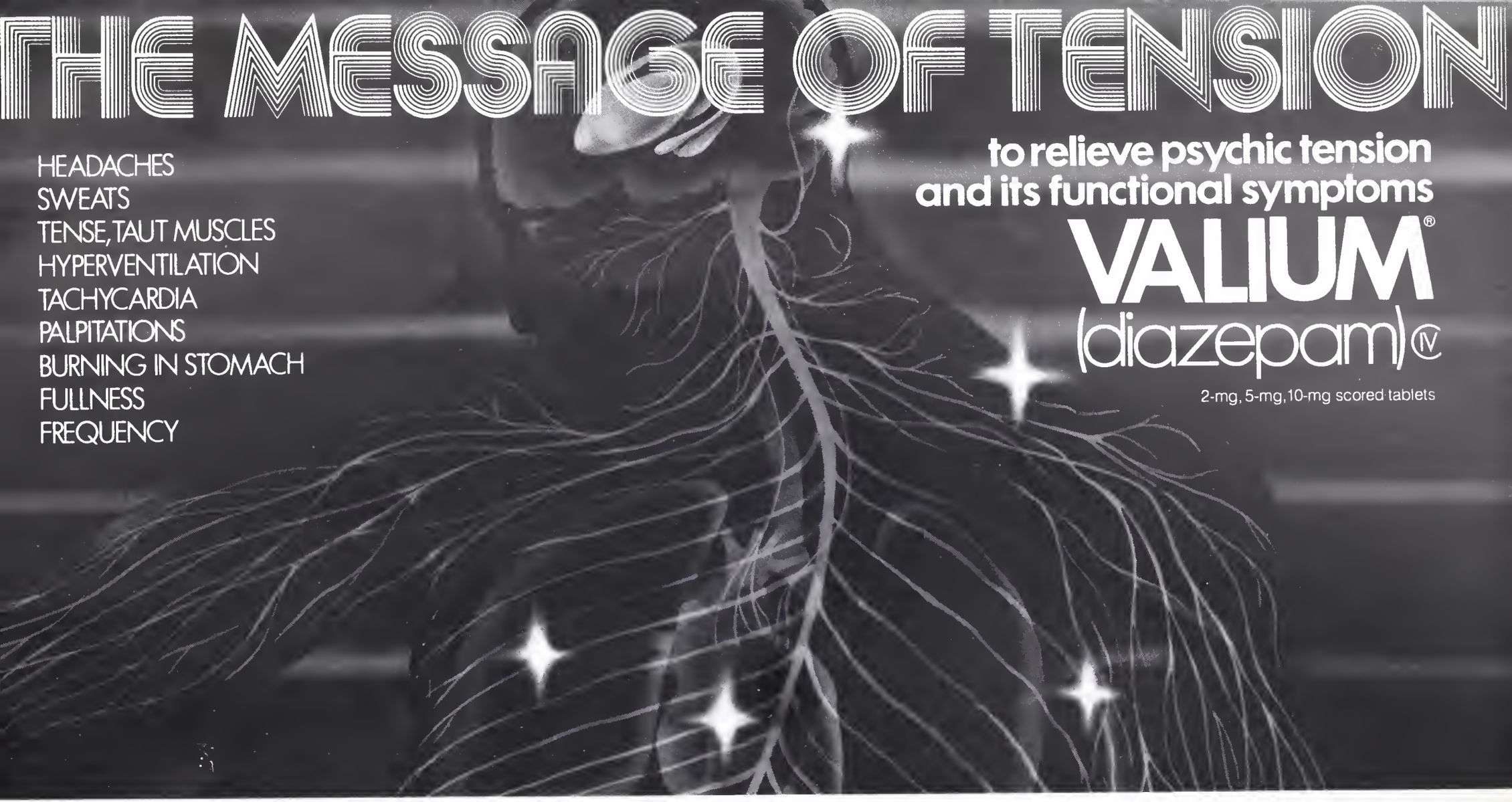

VALIUM®(diazepam)

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).
The effectiveness of Valium in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the indi-

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.
Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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ABOUT COVER: "Snowy Owls" by William Kimura, 1978

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THE RELATIONSHIP OF DIET AND DENTAL CARIES IN THE ALASKA ESKIMO POPULATION

Richard E. Zitzow, M.P.H.

The Eskimo population of North America is frequently cited in dental literature to show the relationship of diet to dental caries. Several studies have documented the dietary change which occurred in the Alaska Arctic Eskimo during this century and suggested that an association between diet and dental caries exists. This paper will offer some historical perspectives of the Alaska Arctic Coast Eskimo relative to dental caries, and review some of the pertinent studies on this population.

A BRIEF HISTORY OF THE ALASKA ARCTIC COAST ESKIMO

The Eskimo of Northern Alaska is generally assumed to be the product of a movement of Mongolian (Paleo-Indian) peoples across the Bering Land Bridge. Anthropologists have estimated that the Eskimo has been in the Arctic since at least 4,000 B.C., and that there were two distinct ethnological groups of Arctic Eskimo peoples: the Nunamiut and the Tareumiat, collectively known as the Inupiat or the people.[1,2,3] The Nunamiut lived in the hills of the North Slope of Alaska which form the steppes to the Brooks Range and were nomadic, following the migration of the Caribou herds. Only one inland settlement, Anaktuvuk Pass, still exists today. The Tareumiat on the other hand established and continue to live in permanent villages along the Arctic coastline and were dependent on marine and land mammals and waterfowl for their existence. Historically, Eskimos formed villages where fish, wildlife, and other foods were naturally available. Food consisted almost exclusively of protein and fat from the mammals and waterfowl which they caught and was for all practical purposes devoid of any form of plant life and simple carbohydrates.[3,4] Wild game such as bear, whale, seal, walrus, caribou, fish and waterfowl made up the greatest bulk of the Eskimo diet. The word Eskimo itself is derived from an Indian word loosely interperted to mean eater of raw flesh.[1,5] Animal flesh was and still is normally eaten raw, and more often frozen and raw.[6] Originally this custom developed as a necessity since fuel was difficult to obtain and consisted of animal fat burned in a small stone lamp primarily for light and secondarily as a source of heat in the dwelling. This custom of eating frozen raw meat has changed little today, particularily in the older and middle generation in the extended three generation family which is common in the Eskimo family unit.[7,8] Although fuel is no longer scarce, the customs of thousands of years have not changed appreciably as this writer has witnessed on numerous occasions. The over developed muscles of mastication typical in the facial structure of the Eskimo might be partially attributed to the chewing of hard frozen meats over a lifetime.

Exposure to western man came in the form of New England whaling ships hunting the great whale herds of the Arctic during the brief summer when the polar ice pack recedes for a few weeks. From the period of the 1870's through the 1920's the summer fleet of whalers bartered with the Eskimos for fresh meat in exchange for tobacco, tea, food stuffs, and utensils such as knives and rifles. It was not until 1885 that the first white men settled in Barrow. New England whalers, Charles Brower and George Leavitt, established a whaling and trading station which still exists today. Students of the Arctic will readily recognize the name of Brower who became an internationally famous citizens of the Arctic, living in Barrow for more than 55 years before his death.[1]

The westernization of the Eskimo culture

Chief, Program Formulation Branch, Alaska Area Native Health Service, Anchorage.

began to have its effects on the health and particularily the dental health of the Eskimo around the period from 1900 to 1920. Several severe epidemics in this Eskimo population occurred during this period, and the first physician, a medical missionary, established a small hospital in Barrow in 1897.[9] As white men permanently established themselves in the Arctic the Eskimo's access to and consumption of simple carbohydrates and refined sugars increased through the trading stations established in the Eskimo communities.[1]

The dietary changes which occurred during the period of approximately 1900 through 1960 brought about a marked change in the dental health of the Alaska Arctic Coast Eskimo and the evidence suggests that an association existed when this population changed from a diet rich in protein and fat to a diet rich in simple carbohydrates. During this period the dental health of this race rapidly deteriorated from a virtually carious free state to the high carious conditions of the remainder of the United States population.

Since Alaska and particularily the Arctic is a globally isolated area any significant man-made change which occurs in that region will be inexorably associated to man's transportation capabilities during that particular era. Transportation improvements which were implemented in Alaska appear to parallel the increase in dental caries of the Arctic Eskimo. Prior to World War II the supply of goods transported to the Arctic was limited to summer ocean transportation which served the Arctic communities on a very limited basis. Thus the quantity of prepared foods transported to the Arctic was necessarily restricted, and the Eskimo diet was still heavily dependent on locally acquired foods during this period.

The advances made prior to and during World War II in aircraft technology opened a new form of routine transportation within Alaska, and particularily in the Arctic. From the late 1930's through current time air transportation has provided a rapid and easy method of supplying the Arctic and serves as the principal mode of travel throughout Alaska.[10,11]

As air transportation improved greater quantities of commercially prepared food stuffs became available to the Eskimo. Communities such as Barrow now receive at least one shipment of supplies and goods daily by large commercial jet aircraft. Smaller aircraft make several weekly trips from Barrow distributing supplies and goods to the smaller and more remote villages.[11] Even the most isolated villages have a small community store in which can be purchased similar food products as any grocery store in the remainder of the United States.

As these changes occurred from the 1920's through the 1960's researchers have observed the Eskimo diet change and its possible association to dental caries.

A REVIEW OF THE ALASKA ARCTIC ESKIMO DENTAL HEALTH

It has been generally believed that the Eskimo had the lowest rate of dental caries of any race or population group in the world. Earlier reports by the Arctic explorers Stefansson[3,5] and Freuchen[10] and also Brower[1] had indicated that the Eskimos teeth were virtually free from decay.

The first documented dental survey ever performed on living Alaskan Arctic Eskimos appears to have been conducted by Waugh in 1929.[12,13,14] Dr, Waugh, a U.S. Public Health Service Dental Officer, was assigned to the Coast Guard Cutter Northland which was conducting research and exploration in the Arctic. The Cutter Northland was equipped with a complete dental unit including a dental X-ray unit. Waugh's studies on nutrition and the dental health of the Eskimo indicated that the effects of the Eskimos dietary changes from the locally acquired animal foods to a carbohydrate rich diet had already started to have its effects in dental caries. His studies also indicated that in those Eskimo villages where carbohydrates were extensively consumed had considerably higher rates of dental caries than those Eskimo villages which consumed smaller quantities of carbohydrates. Waugh also found that in the more isolated Eskimo villages where little if any starches and sugars were consumed the incidence of dental caries was almost non existent. In one village of seventy-eight (78) residents Waugh found only six (6) persons with carious conditions.

Before proceeding with the review of these early studies a caveat will be offered at this point. The majority of the studies to be noted did not attempt to clearly differentiate the types of carbohydrate intake by this Eskimo population. Most studies looked at the gross relationship of the dietary change which occurred and it is assumed that they were attempting to implicate an association between simple carbohydrates and dental caries. An exception was the study conducted by Rosebury and Karshan in 1939[14] in which they attempted to document simple carbohydrate intake by the children in three Eskimo villages. The methodology utilized in this study was to select one village with ready access to simple carbohydrates via a trading post, another village with no

stores, and a third group of children in a missionary or orphanage. Simple carbohydrate intake was determined by questioning the store owner and the missionaries and as a result there may have been several variables in food intake which this study could not control. The results of their study was inconclusive and a causal relationship to sugars and dental caries was not drawn.

In 1925 Leigh[16] provided some suggestive information on the relationship of diet to dental caries when he conducted a dental study of 395 modern crania of world wide Eskimo populations including the people of the Barrow area. Of the 395 skulls examined, Leigh found carious conditions in only four of the skulls and determined the overall incidence of dental caries at approximately 1%. He also found the teeth to be considerably worn down since the Eskimo utilized their teeth as a tool in the tanning of skins by chewing the skins, and the teeth were generally used as a tool in domestic industries.

Waugh's 1928, 1930, 1931 studies[12,13,14] and Russell's 1950, 1958 studies[17,18] indicated that the teeth of the Alaska Eskimo prior to dietary changes had fewer caries than any known group on earth. These early studies also noted that the Eskimo's jaw was large and the muscles of mastication were greatly overdeveloped indicating the utilization of teeth in domestic industries. Studies conducted by Karshan, Rosebury, Seigel and Waugh in 1936 and 1937 indicated that the prevalence of dental caries was quite low in the Alaska Eskimo population studied.[19,20]

Russell's studies of Eskimo males in 1958[17] showed the mean number of decayed, missing and permanent filled teeth to be approximately 8.7. In this study the incidence of carious conditions appears to increase in those Eskimo villages which have greater access to simple carbohydrates and that carious conditions were at a much lower rate in the more isolated areas which probably had less access to sugars. Russell's study also attempted to dispel the notion that the Eskimos' earlier freedom from dental caries was due to a nutritional superiority in their traditional diet rather than the absence of simple carbohydrates. Russell examined 713 Eskimo men of the Alaska National Guard ranging in age from seventeen through fifty-four years and representing fifty-five villages throughout Alaska. Russell classified these men into three catagories according to place of residence in which one group represented Eskimos from principal villages which had ready access to western society foods. The other two groups represented men residing in relatively remote villages, with one of these groups being geographically specific. The results of these groupings are such that the DMF rate is significantly higher in the men from the principal villages and averaged 14.3, while the two remote village groups averaged a DMF rate of 7.05 and 2.95 respectively. Russell also noted that no fluorosis was seen and that fluoride did not account for the low prevalence of caries. Russell's later nutritional surveys[18] indicated that in the children of the Barrow area the number of decayed, missing and permanent filled teeth (DMF) was similar to those reported for children of the contiguous U.S. in the same age groups. His studies of Eskimo dental caries documented a DMF mean of approximately 5.0 for the overall Alaska population.

Bang et al in 1955 and 1965[21] conducted studies of the relationship of diet and dental caries in the extremely isolated Eskimo community of Anaktuvuk Pass. Their studies indicated that a 50% reduction of protein intake had occurred between 1955 - 1965 with the caloric balance made up largely of carbohydrates. Unfortunately they did not differentiate between sugars and other carbohydrates. During the 1955 study approximately 50% of the children of that community were considered to be carious free, while during the later 1965 follow-up study all children had carious conditions and the overall DMF rate had increased from 3.0 to 5.6 in the children. The most striking evidence in this comperative survey is that the percentage of carious free residents of that village had declined from 74.5% to 0% during the time frame of 1955 to 1965 study period.

Anaktuvuk Pass had previous to 1955 been one of the most isolated villages in Alaska. Routine commercial air travel to this village on a twice weekly basis was established during the period of the Bangs et al study and apperently increased the availability of simple carbohydrates to this community. This writer had numerous contacts with the residents of Anaktuvuk Pass during the period of 1973 - 1976 and did not observe any other significant environmental change which may have effected the dental health of that population, other than that stated by the Bang et al studies.

Throughout the period of the studies under discussion which were conducted from 1929 through 1965 the dietary changes in the Eskimo were occurring to varying degrees depending upon the access to and availability of western society foods. The studies cited in this paper are often to show a relationship to diet and dental caries. While there are other studies on

the dental health of the Alaska Arctic Eskimo they do not appear to shed any significant additional information on the subject. The studies reviewed do not appear to develop a clear causal association between simple carbohydrate intake and increased dental caries. However, the cumulative evidence of these studies probably does suggest an association between the Alaska Eskimo's diet change and their subsequent increase in dental carious conditions.

In 1956 the Indian Health Service assumed the responsiblity of providing a medical and dental program to the Natives of Alaska and has continuously collected epidemiological data on the dental health of the Alaska Natives. The following twenty (20) year table of DMF represents all Alaskan Natives including the Arctic Eskimo. Specific epidemological data is not available for the Eskimo population exclusively, however, this data is representative of the population under discussion.

Table I shows a gradual but continuous decline in the DMF in the ages 6 - 17 Alaska Native population. It is difficult to ascribe this decline to any single cause. However, it might be attributed partially to a concerted and continuous dental health education program conducted by Indian Health Service personnel and school teachers in this school age population.

Figure I presents a six (6) year display of the mean numbers of DMF for the total Alaska Native population including the Arctic Eskimo and accurately represents the dental health of the Arctic Coast Eskimo population. A 1975 dental epidemiological survey conducted in the Barrow area by Indian Health Service personnel indicates that approximately 23,000 dental services (all types of services) were required for this population of 3,500 Eskimos to provide an optimal level of dental care.[7]

The total Alaska Native DMF rate as shown in Figure I shows a significantly higher rate of DMF than the 6 - 17 age population group and is possibly the result of the dental hygiene and education programs associated with the school age children.

SUMMARY

This paper has reviewed historically the relationship of the diet to dental caries in an isolated population which has undergone a significant dietary change in recent history. The Eskimo of Alaska has subsisted for centuries on a natural diet of animal protein and fats and had been virtually free of dental caries. During the brief period of this century this population has emerged from a virtual stone age culture into the western Europen culture and has concurrently changed their diet to one similar to western society. As the dietary change progressed the dental health of the Eskimo deteriorated to a level comparable to that of their fellow Americans.

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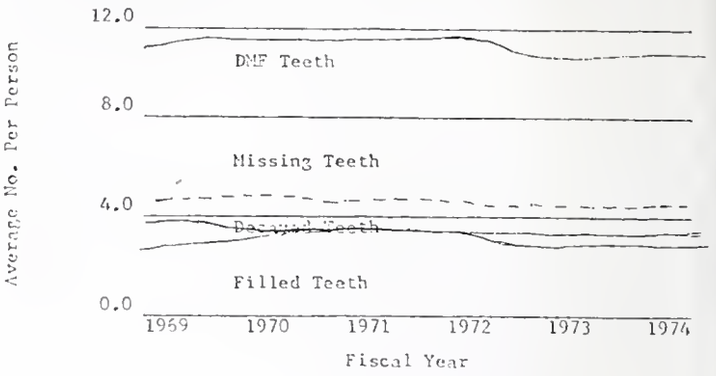
and Welfare, Public Health Service, Indian Health Service, Dental Service Branch, 1973
24. **The Dental Health Program for American Indians, Eskimos and Aleuts**: U. S. Department of Health, Education and Welfare, Public Health Service, Indian Health Service, Dental Health Services Branch, 1967
25. **Annual Report, Dental Services for American Indians and Alaska Natives**: U. S. Department of Health, Education and Welfare, Public Health Service, Indian Health Service, Dental Services, 1974
26. **Annual Report, Dental Services for American Indians and Alaska Natives**: U. S. Department of Health, Education and Welfare, Public Health Service, Indian Health Service, Dental Service Branch, 1970
27. **Annual Report, Dental Services for Indians**: U. S. Department of Health, Education and Welfare, Public Health Service, Indian Health Service, Dental Services Branch, 1964

FIGURE I

RATE OF DECAYED, MISSING AND PERMANENT FILLED TEETH FOR ALL AGE GROUPS IN THE ALASKA AREA NATIVE HEALTH SERVICE



Source: Alaska Area Native Health Service, Dental Branch, Anchorage, Alaska

TABLE 1

ALASKA AREA NATIVE HEALTH SERVICE

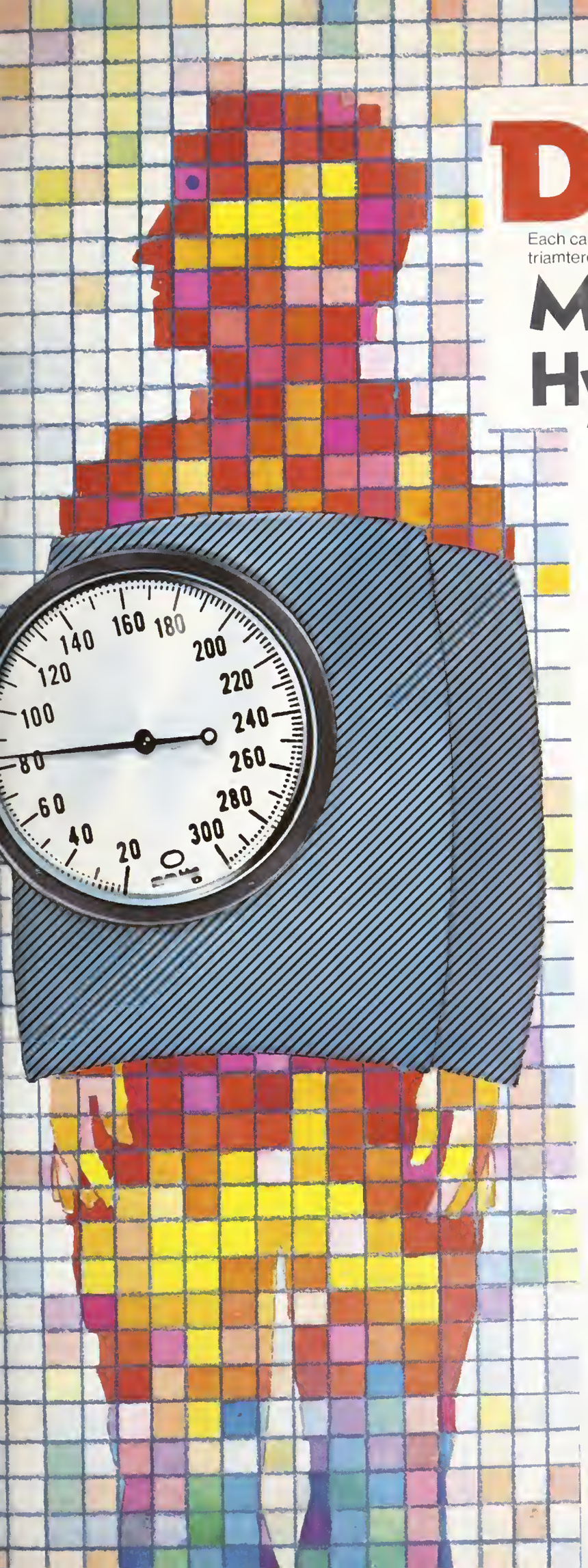
DECAYED, MISSING AND PERMANENT FILLED TEETH AMONG ALASKA NATIVE PERSONS

6 - 17 YEARS OF AGE FROM 1956 - 1975

	1956	1957	1958	1959*	1960	1961	1962	1963	1964	1965
				Average Per Person						
D M F Teeth	N.A.	8.69	8.83	8.98	N.A.	N.A.	9.51	9.30	8.94	8.82
Decayed Teeth		5.63	5.60	5.28			5.66	5.35	4.85	4.14
Missing Teeth		1.70	1.58	1.50			1.10	1.06	.97	.98
Filled Teeth		1.36	1.65	2.20			2.76	2.89	3.11	3.70

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
				Average Per Person						
D M F Teeth	N.A.	N.A.	6.2	5.9	6.0	5.9	5.9	5.8	6.1	N.A.
Decayed Teeth			2.7	2.5	2.5	2.5	2.6	2.5	2.4	
Missing Teeth			0.5	0.5	0.5	0.45	0.5	0.5	0.5	
Filled Teeth			3.5	3.6	3.7	3.2	3.1	3.7	3.7	

* figures available for six months only
N.A Not Available
Source: Alaska Area Native Health Service, Dental Branch, Anchorage, Alaska



Dyazide®

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

Makes Sense in Hypertension*

Before prescribing, see complete prescribing information in SK&F Co. literature or *PDR*. A brief summary follows:

* **Warning**
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K+ frequently; both can cause K+ retention and elevated serum K+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

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When painful spasm
is the presenting
symptom . . .

...in the functional bowel/irritable bowel syndrome*

Bentyl®

(dicyclomine hydrochloride USP)

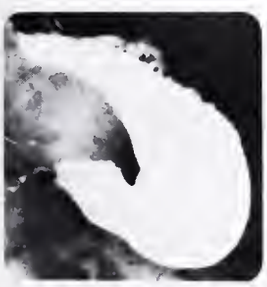
10 mg. capsules, 20 mg. tablets,
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity with minimal anticholinergic side effects†

Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.

Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964

Merrell

8-4420 (Y736A) MNR-804

Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INOICATIONS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FOA has classified the following indications as "probably" effective:

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THESE FUNCTIONAL OISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup)

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CONTRAINOICATIONS: Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis, myasthenia gravis. WARNINGS: In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. PRECAUTIONS. Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with. Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. AOVERSE REACTIONS: Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia, palpitations; mydriasis; cycloplegia, increased ocular tension; loss of taste; headache, nervousness; drowsiness; weakness; dizziness; insomnia, nausea, vomiting; impotence; suppression of lactation; constipation, bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. OOSAGE ANO ADMINISTRATION. Oosage must be adjusted to individual patient's needs.

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Product Information as of October, 1978.

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Oecatur, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Oivision of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

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AMA
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DUPUYTREN'S DIATHESIS

Ralph W. Carr, M.D.

INTRODUCTION

In the earlier part of this century Dupuytren's contractures were thought to be associated with predisposing conditions such as invalidism, alcoholism, liver cirrhosis, epilepsy, and chronic pulmonary disease. More recently the contractures of the palmar fascias have been associated with fibromatoses elsewhere, including knuckle pads over the PIP joints of the fingers, fibrotic contractions due to nodules in the plantar fascias, Peyronie's disease - and diabetes mellitus.

Latterly these conditions have tended to become considered as a generalized probably inherited disease, rather than a local condition. Thus the term Dupuytren's diathesis has been propounded. However, though not all the above clues are necessarily found in each patient, there seems to be a predilection for collagen tissue involvement and diabetes mellitus. Dupuytren's diathesis occurs more frequently in males than in females. An autosomal inheritance factor may possibly be concerned[2,3] and many times a strong family history may be obtained[12].

CASE REPORT

Our outpatient was a 62 year old Army Veteran who had been stationed on Umnak or Atka in the Aleutian Islands in 1942. He was then 26. His hitch was marred by three medical episodes. He had an appendectomy. Then his right foot began to bother him. A painful nodular fibroma on the medial aspect of the plantar fascia was excised and he was on crutches for a while thereafter. Incidentally, he contracted bilateral mumps after a Merchant Seaman with parotitis was dropped off on his island. He and a dozen fellow soldiers were infected, the proband developing right-sided non-suppurative orchitis. This resulted in atrophy of the right testis prior to his Army discharge in 1945.

Painful nodules recurred in the medial sole of this same foot in '74, necessitating re-excision and a ten day stay in his local Missouri hospital. Thereafter, similar tender nodules appeared in the medial sole of his left foot. In 1975, these were excised. In a fourth sequence involving his feet, nodes recurred in the medial sole of the right foot and his local surgeon excised these in 1976.

Pathology: The pathologist at his local hospital reported the excised tissue to be, "A segment of ligamentous fibroconnective tissue measuring 1.25 cm. in greatest diameter by 9.0 cm. in length. There is a nodular area of proliferative sclerotic tissue near one margin of the resection. Diagnosis: Benign nodular fibrous hyperplasia consistent with Dupuytren's contracture."

Possibly fortelling future diabetic tendencies, a routine SMA profile, made at the local hospital at the time of the 1975 operation, reported a serum glucose (not stated whether fasting or not) of 145 mg/%. The patient claimed to be then unaware of any symptoms of glucose metabolic dyscrasia. But in 1977 he developed an excessive craving for candy, also a polyuria. He reported these symptoms to his hometown generalist, who had the tests repeated by his laboratory. The patient recalled his blood sugar to have been found to be "800 mg/%"! This is quite likely exaggeratedly high since during his nine-day hospitalization, "they tried insulin, then put me on a 1200 calorie American Diabetic Association diet and oral antidiabetics." At the time of our examination in 1978 he was doing well on diet alone and no antidiabetic medications. Serum glucose at the V.A. Hospital in 1978 was 92. mg/%.

Ambulatory Care Service, Harry S. Truman Memorial Veterans Administration Medical Center, Columbia, Missouri. Dr. Carr practiced in Ketchikan for 34 years and is a former President of ASMA '64-'65.

During our short interview he was not asked when the Dupuytren's contractures (DC) of his hands first appeared. His Service Record of '43 quoted the patient as saying that about one year prior he had noticed a small nodule on the sole of the right foot about the middle of the arch. This became longer and painful so that he walked on the outside of his foot, thus favoring the sore area, causing cramps in the right foot and lower leg. This pea-sized nodule was easily removed under local anaesthetic. He then developed a mild cellulities of the plantar aspect of the right foot secondary to rupture of the operative incision when running a bayonet course the following month.

Also, during our short interview he was not questioned about a possible diabetic pedigree.

Complaint

"Bad feet. I have aches and pains in my feet and legs which wake me at night. My right foot is the more sore, but both are bad. Usually two hours is the maximum time I can be on my feet without a cane. My right foot cramps and draws at night. I've lost the grip in my hands and my fingers are starting to draw. Grasping the steering wheel of my car in driving makes my hands ache. I have varicose veins all the way up my right leg to the groin. And I have to stay out of the sun and use Diprosone on my skin (this was his only medication at the time of our examination). Early in '78 the dermatology people in this (V.A.) hospital biopsied a place on my forehead."

Physical Examination

General

62 year old, right-handed Caucasian male with surprisingly muscular shoulders and a slight limp on the left. Height, 69-¾"; weight, 176½ lbs. (weight before ADA diet, 209 lbs). Blood pressure, 134/72; pulse, 68.

Skin

There were actinic keratoses over the dorsal aspect of both forearms. There was a small biopsy scar in the left frontal scalp dating from early 1978. He had at that time reported to the V.A. Dermatology Clinic in Columbia because of erythematous placques on the face and sun-exposed areas of the arms. These were first thought all to be polymorphous light eruptions, but porphyria cutanea tarda was to be ruled out. Twenty-four hour urine specimens were negative for qualitative and quantitative uro-porphyrins. KOH slides were also negative. The tissue biopsied from the frontal scalp was found to be "consistent with discoid lupus erytematosus".

Radiology

Dermatology, because of their finding of subcutaneous placques over the PIP joints of the fingers, as well as Dupuytren's contractures of the palms, had ordered X-rays of the hands. The viewer stated: "There is moderate soft soft tissue swelling over the proximal interphalangeal joint space throughout the middle fingers bilaterally. There is moderate hypertrophic spade formation of the distal phalanges. A sesamoid index of 30, which is at the upper limit of normal for being suggestive of acromegaly. There is minimal degenerative change with osteophyte formation at the greater multangular-first metacarpal joints. There may be minimal narrowing at the middle IP joints and no frank evidence of narrowing or destruction of the carpo-phalangeal joints. There also appears to be a questionably slight fluffy periosteal reaction of the radial aspect of the 2nd and 3rd proximal phalanges, especially on the left, but less on the right. These findings could also be compatible with Reiter's syndrome, or maybe earlier manifestations of sarcoidosis. Impression: manifestations suggestive of hyperparathyroidism, acromegaly, Reiter's syndrome, and less of sarcoidosis."

Head, Neck, Eyes, Ears, Nose, Throat, Chest, Heart, Abdomen

Examination of these areas was essentially normal. Vision was 20/50 bilaterally. There was a tic of the right eyelids and right angle of the mouth. Tonsils had been enucleated. There was an old appendectomy cicatrix.

Genito-Urinary

There was an atrophic right testis, thought secondary to his mumps orchitis, otherwise normal adult male external genitalia. In view of the presence of his palmoplantar Dupuytren's fibroplasias, a special search was made for Peyronie's disease (induratio penis plastica), but chordee of fibrous placque was not evident on the dorsum of the penis. The prostate was moderately enlarged, with a resilient ridge along the right laberal lobe. He gave a history of nocturia X 3.

Extremities

Varicose veins were noted on the right leg. These were of pencil diameter, tortuous, convoluted, and extending from the lateral right ankle up to the lateral right knee, up and over the patella to the antermedial thigh as far as the fossa ovalis. There was slight edema of the right lower leg and foot.

Of more interest were his fingers which showed knobby, lumpy involvement by placques or knuckle pads over the dorsum of the proximal

interphalangeal joints of the fingers of both hands, the right ring finger being excepted. Similar, but less striking placques or pads were apparent on all four fingers of the left hand. These subcutaneous pads were attached to the overlying skin, but moveable upon subjacent tissue. These pads measured 1. cm. and 2. cm. long, and averaged about 1. cm. in width.

Typical Dupuytren's contratures were obvious in the palms of both hands, but were less severe than sometimes seen. Even so, his fingers were maintained in slight flexion, with more bow-stringing of the 4th finger, but with contractures over the metacarpals of the 3rd and 5th also. Strength of his grip was only fair.

The arches of his feet were good and not hypernormal. Along the medial arch of the right foot were two parallel curvilinear 8.0 cm. long operative scars. At the proximal angle of the more medial scar in the sole of the right foot was a recurrent 1.5 cm. x 3.0 cm. tender moveable nodule. This was despite three previous operations for this same condition on this same foot. The left foot, likewise on its medial arch, showed a 9.0 cm. operative scar extending from the ball of the foot proximally. In the middle 3rd of this scar also there was a recurrent 3.0 cm. tender nodule.

Principle Findings

1. Dupuytren's contractures of the palmar fascias of both hands.
2. Status/post surgical excision of Dupuytren's fibromatous tissue comprising nodules from the medial plantar fascias of both feet, 3X on the right foot and 1X on the left, with recurrent painful nodules in the surgical scars bilaterally.
3. Fibrous subcutaneous placques or knuckle pads over the dorsum of the PIP joints of the fingers of both hands.
4. History of adult onset hyperglycemia, previously treated by insulin, then oral antidiabetics, but now solely by a 1200 calorie A.D.A. diet.
5. Status/post biopsy of frontal scalp skin lesion with tissue obtained compatible with discoid lupus erythematosus.

DISCUSSION

Contractures of the digits of the hand was said first observed by Planter in the early 1600's[1]. The name of the condition to this day is that of French surgeon Baron Guy Dupuytren, who wrote almost a century and a half ago describing surgery for fibrous palmar nodules accounting for finger contractures in a coachman[6]. Dupuytren himself mentioned similar changes in the sole of the foot. Garrod, in 1904, described firm placques of tissue adherent to the skin overlying the dorsum of the PIP joints of the fingers in association with DC of the palm[9]. As Lettin[13] pointed out in 1964, it was not until 1941 that Lund[14] drew attention not only to knuckle pads in the fingers, and to nodules in the soles, but also to stiffness of the shoulder joint and to Peyronie's disease. Skoog[22] 1948, Early[7] 1962, and Hueston[11] 1963, confirmed an association leading to a diathesis or a constitutional predisposition to the producing of Dupuytren's tissue.

The association between the lesions in the palm and in the sole has thus repeatedly been confirmed, and as noted by Lettin, is unlikely to be fortuitous. Marked involvement of the foot is unusual without similar lesions in the palm, with well developed knuckle pads often preceding the development of Dupuytren's contracture (McIndoe and Beare, 1958[15]).

In Lettin's female epileptic with DC of the palms at age 27 (about the age of our patient who developed symtoms at 26), severe plantar fibromatoses, prominent knuckle pads, periarthritis of the shoulders, and hyperplasia of the gums, the plantar lesions recurred despite radical excision (just as in our patient). His patient's plantar contractions triggered hammer toes, the 2nd toe of each foot. With his patient the knuckle pads on one hand disappeared after radiotherapy.

Siegler[2] in his chapter on DC in Hollander, et al, "Arthritis and Allied Conditions," mentions four sequential histologic changes in plantar fibromatoses. In the early cellular changes the finding of mitotic figures has led to a mistaken diagnosis of fibrosarcoma, and this has promptet unnecessary surgical procedures, even, lamentably, to amputation in isolated instances. Others[17] have also warned of this possible error.

Recently, electronic miscroscopic investigations have suggested a cytoplasmic fibrillar system and other evidence of contractility in the cells of the lesions of DC[8]. Thus the involved cells appeared to be myofibroblasts which had the ability to contract. This property may play a role in the clinical contracture.

Early[7] found knuckle pads associated with palmoplantar fibromatosis in some 20% of men, 12% of women.

A more than coincidental association with diabetes has been observed, according to Lettin[13]. Terschemeyer and Gottlieb[24] in 1904 reported a 15% incidence of diabetes mellitus in 213 patients with DC, age 50-70. Davis and Finesilver[5] who evaluated the re-

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The anorexic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.[1] And the unique chemistry of Tenuate provides "...anorexic potency with minimal overt central nervous system or cardiovascular stimulation."[2] Compared with the amphetamines, diethylpropion has minimal potential for abuse.

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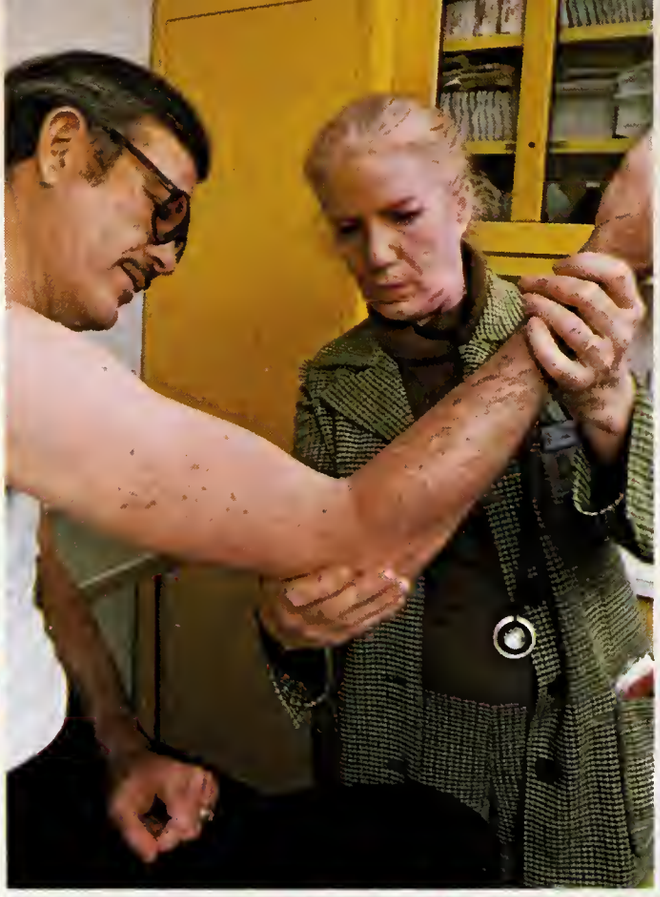
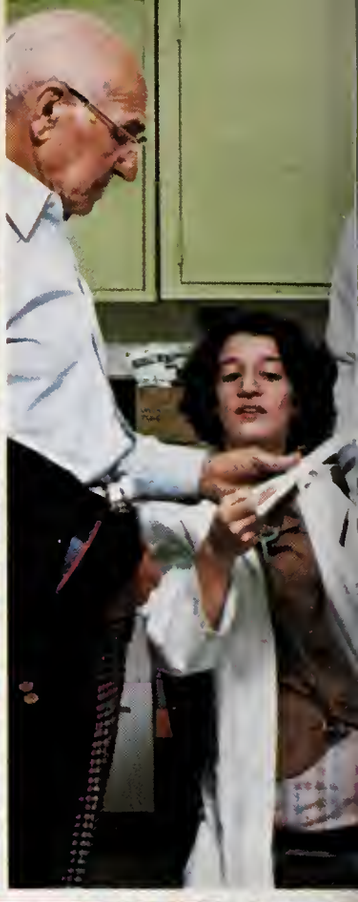




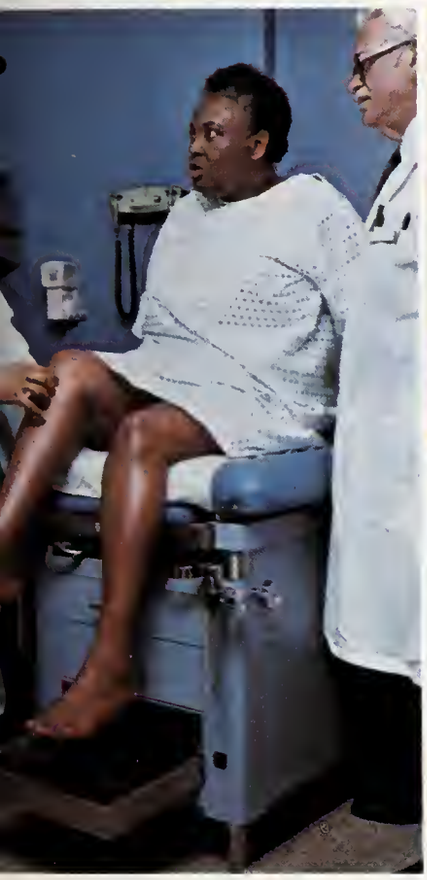
The evidence of experience

Since October 1974 when Motrin® (ibuprofen) was introduced in the United States, it has been used by more than 6,000,000 patients with rheumatoid arthritis* or osteoarthritis. Rarely has an ethical pharmaceutical product been prescribed for so many patients in so short a time. In addition, more than 450 studies presenting new data related to Motrin have been published.

The 6,000,000 patients already treated with Motrin is an objective measure of physicians' confidence in the ability of Motrin to relieve the pain and inflammation associated with rheumatoid arthritis and osteoarthritis.

So it is not surprising that in this short period Motrin has become the most frequently prescribed alternative to aspirin. Motrin relieves joint pain and inflammation as effectively as indomethacin or aspirin, but causes significantly fewer CNS and milder GI reactions. However, gastrointestinal bleeding, sometimes severe, has been associated with Motrin, aspirin, indomethacin, and other nonsteroidal antiarthritic agents.

*The safety and effectiveness of Motrin have not been established in patients with Functional Class IV rheumatoid arthritis (incapacitated, largely or wholly bedridden, or confined to wheelchair; little or no self-care).



Motrin 400 mg TABLETS
ibuprofen, Upjohn

The confidence that comes from experience—one more reason to prescribe Motrin.

Please turn page for a brief summary of prescribing information.

Upjohn The Upjohn Company, Kalamazoo, Michigan 49001

J-6857-4

The confidence that comes from experience—
one more reason to prescribe

Motrin 400 mg TABLETS
ibuprofen, Upjohn

Indications and Usage: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

Contraindications: Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

Warnings: Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

Drug interactions. *Aspirin* used concomitantly may decrease Motrin blood levels. *Coumarin:* Bleeding has been reported in patients taking Motrin and coumarin.

Pregnancy and nursing mothers: Motrin should not be taken during pregnancy or by nursing mothers.

Adverse Reactions

Incidence greater than 1%

Gastrointestinal: The most frequent type of adverse reaction occurring with Motrin (ibuprofen) is gastrointestinal (4% to 16%). This includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness*, headache, nervousness. **Dermatologic:** Rash* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

Incidence: Unmarked 1% to 3%; *3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

Overdosage: In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

Dosage and Administration: Suggested dosage is 300 or 400 mg t.i.d. or q.i.d. Do not exceed 2400 mg per day.

How Supplied

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Bottles of 500	NDC 0009-0733-02
Motrin Tablets, 400 mg (orange)	
Bottles of 60	NDC 0009-0750-01
Bottles of 500	NDC 0009-0750-02
Unit-dose package of 100	NDC 0009-0750-06
Unit of Use bottles of 120	NDC 0009-0750-26

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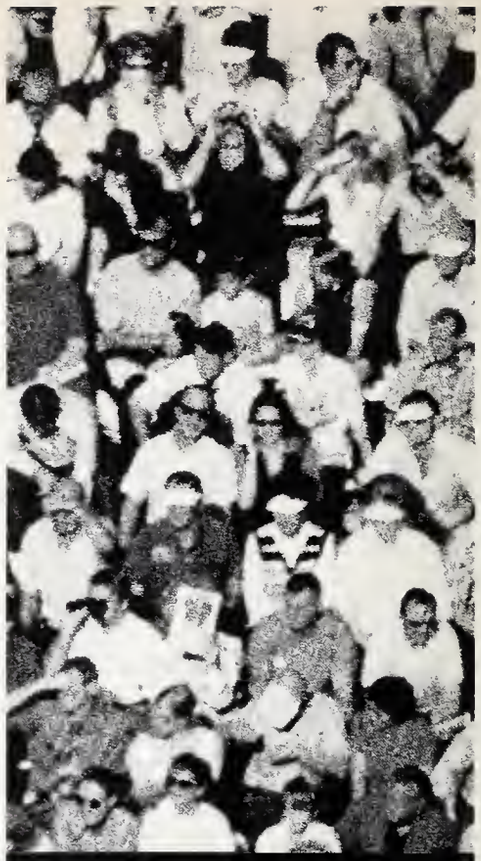
NIM-3

Upjohn

The Upjohn Company
Kalamazoo, Michigan 49001



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lationship in a controlled manner, found diabetes in 10% of 40 patients with DC. In two other series Ricci et al[10], and Spring et al[23], DC was found in 10% of 804 diabetics, and in 400 consecutive diabetic patients, respectively, compared with 1098 non-diabetic controls, and 55 of 500 non-diabetic medical patients. These studies were published in '63 and '70. In a hospital survey, Revach et al[19] in 1972, found DC present in 10% of 900 patients, 475 of those affected being overtly diabetic, and an additional 57% of 28 patients having abnormal glucose tolerance tests. Gray et al, in 1976[10] reported that in a home for the aged the incidence of DC was 63% of known diabetics compared with 22% of non-diabetic residents. At the same institution the incidence of symptomatic diabetes mellitus was 66% of 79 patients with DC, and 50% of 142 controls.

Reporting from Tel-Aviv in '77, Ravid et al[18] gave their analysis of the incidence of DD in a large group of diabetic and non-diabetic patients. In a non-selected population of 2,509 inpatients and outpatients DD was found almost exclusively in association with diabetes mellitus. Among 185 patients with Dupuytren's diathesis encountered in this study, diabetes mellitus was definitely present in 179 (96.7%). Two of the remaining six patients had a strong family history of diabetes mellitus, and only four patients were allegedly non-diabetic.

In their study, the relative frequency of DD in patients with diabetes mellitus was 17.6%, significantly higher than in patients without overt diabetes. Approximately every sixth diabetic was found to have Dupuytren's diathesis.

They were of the opinion that the high relative frequency of DD in women and relatively small preponderance of the right hand virtually excluded manual labor or trauma as possible etiologic factors. No association with chronic pulmonary disease was found in their patients.

Davis et al[5] believed that the clear-cut association of Dupuytren's diathesis with diabetes mellitus in their series might imply that DD is a non-hyperglycemic manifestation of diabetes mellitus. In their opinion, the presence of DD in a patient should therefore be considered a marker of diabetes mellitus and call for an investigation of glucose metabolism.

SUMMARY

Dupuytren's contractures of palmar fascia should alert the physician to the occurrence of Dupuytren's diathesis or disease, to include fibromatoses to be found elsewhere.

When plantar fascias are affected, they frequently cause tender, more discrete nodules usually on the medial aspect of the sole of the foot. These nodules tend to be recurrent. In Lettin's[3] patient they seemed to cause a hammer toe in the 2nd toe of each foot.

Knuckle pads, placques, or subcutaneous nodules may form over the dorsum of the PIP joints of the fingers, and these may herald rheumatoid arthritis.

The tendency to develop diabetes mellitus or glucose intolerance seems to be an almost invariable concomitant of Dupuytren's diathesis. This tendency increases with age. Emphasized is the need to search for glucose intolerance when any of the disorders of DD give one a clue. Conversely, it may be well to adivse diabetic patients that they are at risk for the development of musculoskeletal disorders[16].

A warning is reiterated that the mitotic histologic phase of the development of fibrous nodules in the soles of the feet in DD may be mistakenly thought to be the relatively rare fibrosarcoma, and lead erroneously to an amputation[17].

The cause of Dupuytren's disease is not known, but the recent finding of chromosonal abnormalities in the fibrotic tissue[2] suggests that it is a generalized disease rather than a local condition. Some authors have suggested an autosomal dominant inheritance, but others have been less conclusive and termed the condition "Dupuytren's Diathesis" to define an inherited tendency to develop DD [11,13].

The 62 year old man, whose case is reported herewith, was seen only briefly as an outpatient, so was not interrogated as to possible genetic relationship. It appears that he had hyperglycemia at the time of his second foot operation in '75, before he noticed diabetic symptoms.

Our patient, when seen in 1978, had Dupuytren's contractures of the palmar fascias of both hands, knuckle pads and the PIP joints of his fingers, scars from excision of fibromatous nodules of the medial plantar fascias of both feet, recurrent tender nodules in the scars on both feet, and was on an American Diabetic Association diet.

In addition to the above, our patient gave a history of an early 1978 biopsy of a skin lesion of the frontal scalp, with findings compatible with discoid lupus erythematosus. This finding, not found reported elsewhere as possibly interrelated to Dupuytren's diathesis, may or may not be justifiably included as clinically relevant. However, it appears that it might be considered a further involvement of collagen in a patient with Dupuytren's diathesis.

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Live virus measles vaccine is safe and effective, says the American Medical Association. Age of vaccination should be 15 months, or later for children who miss out at this age. It also should be given to children who have received the killed virus measles vaccine. In the event of a neighborhood epidemic, your doctor might decide to begin immunizing children at as early an age as six months.

Widespread use of the rubella vaccine could eliminate the reservoir of disease among children, who are the major source of infection for pregnant women. Adolescent and adult women should be vaccinated well in advance of possible pregnancy. Once pregnancy is suspected, or confirmed, the women should not be vaccinated.

Live rubella vaccine is recommended for children at 12 months or later. If a combination vaccine — the two measles and mumps — is used, it is given at 15 months.

Live mumps virus vaccine should be administered to children at 15 months of age. It also is indicated for children approaching puberty, for adolescents, and for adults (especially men) who have not had the disease.

March, 1979

Frank Chappell
Science News Editor
AMA

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***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend to or do become pregnant.**

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Precautions: In elderly and debilitated, limit dosage to sm est effective amount to preclude ataxia, oversedation, conf sion (no more than 2 capsules/day initially; increase grad as needed and tolerated). Though generally not recommended, if combination therapy with other psychotro seems indicated, carefully consider pharmacology of particularly potentiating drugs such as MAO inhibitors phenothiazines. Observe usual precautions in presen impaired renal or hepatic function. Paradoxical reactio ported in psychiatric patients. Employ usual precaut treating anxiety states with evidence of impending de sion; suicidal tendencies may be present and protect measures necessary. Variable effects on blood coagu reported very rarely in patients receiving the drug and anticoagulants; causal relationship not established.

Adverse Reactions: No side effects or manifestations not seen with either compound alone reported with Librax. Wh chlordiazepoxide HCl is used alone, drowsiness, ataxia, co fusion may occur, especially in elderly and debilitated; avoi able in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope re ported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, gener ally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment, blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported wi Librax typical of anticholinergic agents, *i.e.*, dryness of mou blurring of vision, urinary hesitancy, constipation. Constipatio has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

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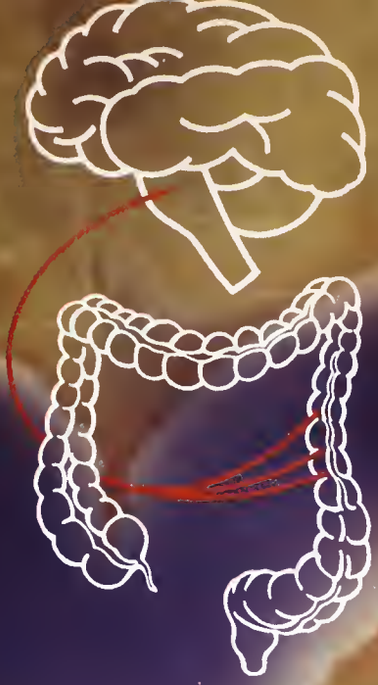

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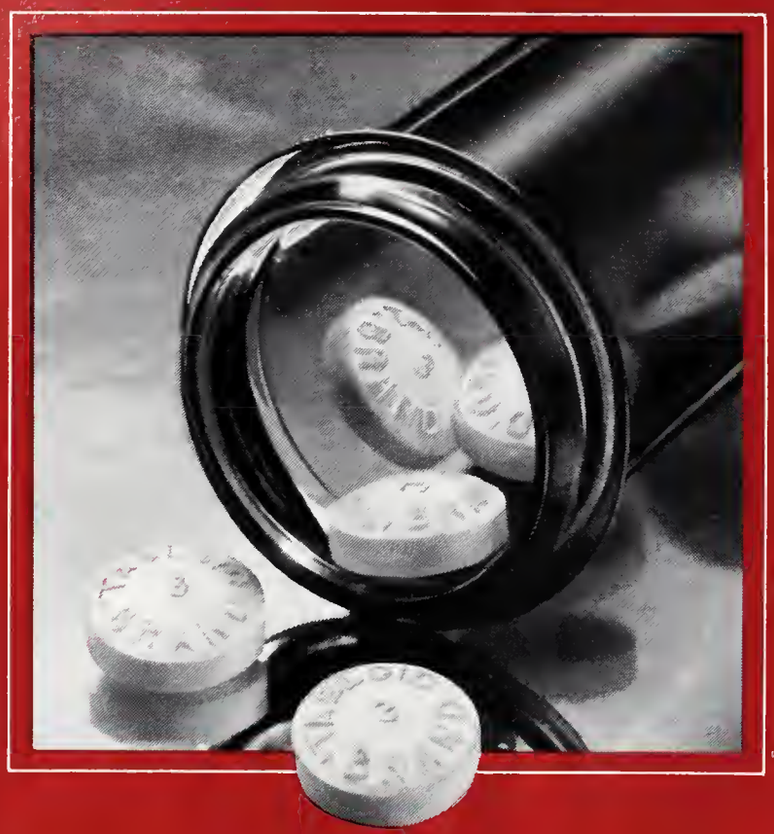

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SCABIES: DIAGNOSIS and TREATMENT

Douglas N. Naversen, M.D.

Scabies infestation is a problem of world-wide importance. The present pandemic has not spared Alaska, and scabies is a common and often overlooked diagnosis. The following paper will discuss history, life cycle, symptoms and signs, atypical varieties, and differential diagnosis of scabies. Special emphasis will be given to diagnosis and treatment in hopes of avoiding evolution into the "seven-year itch".

The scabies mite, Sarcoptes Scabiei, has existed for centuries, but it was not until World War II that it received much investigation.[1] Its importance became apparent when large numbers of soldiers contracted scabies due to overcrowding and battle conditions. The epidemic continued throughout the war years, and then faded into obscurity by the 1950's.[2] However, dramatic changes in incidence and prevalence developed thereafter, resulting in a pandemic that failed to respect geographical location, economic station, or social status. For example, one practitioner noted a rise in cases beginning in the mid-sixties, increasing by 1975 to pre-World War II levels.[3] A further influx came as Vietnamese refugees fled Indochina bringing scabies to this country.[4] This level of infestation rides a stable plateau to the present.

Forgotten studies performed three decades ago provided a framework of information as scabies once again became rampant.[5] Scabies is transmitted by the adult female mite which burrows into the stratum corneum of the host. Her body size is one-sixteenth of an inch, and she appears as a barely visible gray "speck-of-dust" at one end of the burrow. During her thirty day adult life, the female mite tunnels at the rate of one-half to five mm. a day, laying two to three eggs daily. Hatching eggs progress through larval and nymph stages before reaching adulthood by day ten to fourteen. Fortunately for the host, less than ten percent of eggs reach maturity. Once on the surface of the skin, the mites travel one inch per minute. The cycle is repeated as the female burrows into the skin, copulates with a passing male, and becomes fertile for life. Experienced investigators become skillful at recovering the burrowing mites from infested human skin by scraping, and the average number of adult mites thus obtained is eleven. The mites survive away from the human body for only two to three days at room temperature, and fifty degrees Centigrade rapidly kills them. Fomite transmission is not a major factor; that is, close body contact with another person is normally required before infestation occurs.

Whenever a patient presents with excoriated skin lesions in association with severe nightly pruritus, scabies should be considered. Common locations include finger webs, penis, scrotum, flexor wrists, extensor elbows, feet, ankles, umbilicus, lower buttocks, nipples, and anterior axillary line, but almost the entire body may be affected. Some people itch severely throughout the day, but the characteristic feature is nocturnal itching. Except in the newborn, scabies seldom occurs above the neck, and lesions of the face or scalp should suggest an alternate diagnosis. Also, scabies rarely occurs in blacks, and a pruritic rash in a Negro is unlikely to be a mite infestation.[6]

The pathognomonic sign of scabies is the burrow, a white or gray, fine, thready line one mm. in diameter and two to five mm. in length. A small vesicle may be noted at the far end, indicating the location of the adult mite. Excoriations and secondary infection often destroy the classical picture, but usually diligent searching will reveal at least one typical site. Obtain best yields on scraping by running the length of the burrow with a number 15 scalpel blade, and use mineral oil rather than potassium hydroxide in making the slide. Other body

Chief of Dermatology, United States Air Force Hospital, Elmendorf Air Force Base, Anchorage, Alaska 99506.

lesions may appear as erythematous papules or irritated, eczematous skin. These represent a systemic allergy to distant mite parts, and mites are not recovered from these locations.

Patients with a history of scabies in the past acquire partial immunity.[7] Successful inoculation of human volunteers is more difficult on reinfection than is the primary infection. Immediate pruritus may ensue on reinfestation, rather than requiring an average incubation period of one month in the primary infection. In addition, fewer mites are found on subsequent attacks compared with the first attack. Apparently, the patient becomes sensitized to the mite, and this immunity is protective in function.

Atypical forms of scabies have been described by Orkin.[8] Scabies incognito results from use of fluorinated topical steroids which suppress the symptoms but not the spread of the mite. Scabies "in the clean" occurs in those with good personal hygiene, causing difficulty in diagnosis due to few lesions. Nodular scabies appears as red-brown lesions in the groin and axilla in ten percent of patients, and the nodules persist after the generalized scabies clears. Although the nodule is a hypersensitivity phenomenon, a skin biopsy may mimic lymphoma. Intralesional steroids and time will resolve the disorder. Animal-transmitted scabies usually results from a new puppy in the household, and it is self-limited in man if re-exposure to the pet is avoided.[9] Mites cannot be recovered from the skin by scraping. In the author's experience, canine scabies is rare compared with human scabies.

In addition to the above, other varieties of scabies exist. Scabies in infants may have an atypical distribution as the face and scalp may be involved, perhaps related to nursing from an affected mother.[8] Although the eczematous nature may cloud the diagnosis, close inspection will reveal the characteristic burrow. Inspection of parent's hands may show finger web involvement. Crusted scabies is a rare disorder of mental defectives and the immunosuppressed. Instead of ten burrows, there are ten thousand, resulting in thickened nails, hyperkeratotic lesions of palms, soles, ears, and scalp, and generalized exfoliation of the skin. There is a high risk of contagion.[10] Crusted scabies may occur in the institutionalized, and it may also occur in renal transplant patients due to immunosuppression.[11] Scabies can be complicated by bacterial infections, and nephritogenic strains of streptococci have resulted in acute glomerulonephritis in both tropical and temperate climates.[12,13] In addition, scabies may be venereally transmitted, and gonorrhea and syphilis may coexist.[8]

Treatment is quite effective with one percent gamma benzene hexachloride (GBH). The cream or lotion is applied at bedtime to the entire body surface from the chin to the toes, and it is washed off in twelve to twenty-four hours. Special emphasis is given to finger webs and male gentalia, and a common reason for lack of cure is failure to apply the medication to the entire body surface below the chin, such as hard-to-reach areas on the back. A patient is unlikely to transmit scabies twenty-four hours after treatment,[14] but to insure cure, treatment is repeated in one week. At the start of treatment, launder bedclothes, linens, and clothing that will be worn for the next few days. Fumigation of the house is not required, nor is cleaning or scrubbing of fomites. All household members and close contacts should be treated whether or not they are itching to prevent "ping-pong" scabies. A systematic, community-wide public health program may be required at times, such as in the case of an Arab village in which 22 percent of the population and 66 percent of all families were infested.[15]

The incubation period before pruritus ensues is four to eight weeks,[16] and one of the commonest reasons for recurrence is reinfection from untreated contacts. The patient should be questioned about known scabies exposure in the recent past, or whether other family members itch. An epidemic of occupational scabies on a river pleasure craft has been described, and inquiries as to whether fellow employees itch may be rewarding.[17] Does a boyfriend or girlfriend have severe nightly pruritus? Could the child have acquired her infestation from wrestling with playmates at school, or from contact with the babysitter or relatives? Normally, prolonged close contact is required before infestation occurs, in particular close household contact. Scabies is not passed by shaking someone's hand, but it may be acquired by sharing someone's bed. There may be asymptomatic carriers of scabies.[16]

Alternative forms of therapy include ten percent crotamiton applied two nights in a row, or five percent precipitated sulfur in petrolatum applied three nights in a row.[14] The latter is messy and requires compounding by the pharmacist.

In the past few years, there has been concern that treating newborns and children with GBH may result in central nervous system toxicity such as headaches and seizures.[18,19] GBH is absorbed systemically after topical application, and one study documented a nine percent

Health and Safety Tip

From the American Medical Association

Sore Throat Nature's Warning of Illness

Throat Is Warning

Does your throat hurt?

If so, you may console yourself with the knowledge that you have plenty of company.

Sore throat is one of the more common physical discomforts that plague most of us from time to time.

Sore throat is nature's warning system that something in your body is out of order, says the American Medical Association.

Often a sore throat accompanies a common cold, and the soreness passes in a few days. But, sore throat also can be the symptom of any of a wide range of diseases, from diphtheria to leukemia, that require your physician's skill, not your guessing, to diagnose.

Sometimes tonsils and adenoids are involved in causing a sore throat, and when these organs repeatedly cause trouble they frequently are removed.

Tonsil-adenoid removals account for half of all surgery performed on children. Sometimes the removal helps prevent sore throat, sometimes it doesn't.

Allergies can cause sore throats. Cold, dry winter air can trigger it. So can extreme thirst, excessive smoking or mouth breathing. Anything that dries out the throat and cuts off secretions that normally wash dust away.

Virus infections of many types also are a cause of sore throat, and everyone who has had flu knows that this particular virus disease often causes the throat to hurt.

"Strep throat" is a serious infection that occasionally leads to rheumatic fever and possible heart damage. It can be knocked out with penicillin, if it is diagnosed in time.

The crucial diagnostic test in sore throat is the swab test, through which the germs causing the trouble can be identified.

There is little or nothing you can do to cure a sore throat at home. There are medications which bring temporary easing of the discomfort. Most sore throats will clear up in a few days without treatment. If the sore throat persists, the cure must be launched by your physician.

February, 1979

Frank Chappell
Science News Editor
AMA

recovery rate in the urine within five days after applying it to the forearm.[20] There have been anecdotal case reports of toxicity after GBH application,[21] but in the author's experience, its use has been safe in young children and babies when excessive application is avoided.

Another problem associated with excessive use of GBH is apparent worsening of the scabies. GBH is a known irritant, and overuse will contribute to an eczematous dermatitis. The more the patient itches, the more he applies the medication, and a severe irritant dermatitis ensues despite eradication of the mite. It requires one ounce to cover the average adult's body, so the patient is given only two ounces plus any needed for contacts. Children require correspondingly less.

Secondary infection with impetigo, furuncles, or cellulitis requires prompt use of systemic antibiotics. However, a mistake is for the patient to attempt to scrub his skin clean by washing many times during the day. Unless grossly infected, he should be specifically told to decrease the frequency of bathing to avoid irritation. Avoiding caffeine-containing beverages, and use of antihistamines will help until the itching resolves.

Sometimes dramatic relief of itching occurs shortly after the first application of the scabicide, but occasionally, pruritus continues for three weeks due to systemic allergy to mite parts. A burst of prednisone in a tapering dose of forty mg. on the first day, and then five mg. less each morning for eight days (total of thirty-six five mg. tablets) will give rapid relief of pruritus. An intramuscular injection of triamcinolone acetonide forty mg. in the buttock is effective.

Differential diagnosis may include atopic dermatitis, neurotic excoriations, dermatitis herpetiformis, flea or insect bites, pediculosis corporis and other skin conditions. Occasionally, a patient with well-documented scabies is cured, only to suffer for months thereafter with delusions of parasitosis for any minute itch or erruption. Firm reassurance over a period of time may be necessary. It is beyond the scope of this paper to review the characteristics of the previous dermatoses. However, if the diagnosis of scabies is enterained, a therapeutic trail of scabicide is justified without definitive microsopic diagnosis.

In summary, scabies is a disease that is common in Alaska and throughout the world. An understanding of its life cycle and pattern of transmission is important in epidemiology and treatment. Many cases may be readily diagnosed by observation of burrows of the finger webs, penis, scrotum, and other body sites in a patient with severe nightly pruritus. However, a high index of suspicion may be necessary in atypical cases so the diagnosis is not overlooked. Many months of suffering, and spread to other household contacts may be avoided by early treatment with one of at least three effective scabicides available in this country. Finally, an understanding of reasons for prolonged itching after "adequate treatment" will be necessary to insure cure of the patient's problem.

Nonproprietary Names and Trademarks of Drugs

Gamma benzene hexachloride — Gamene, Kwell
Crotamiton — Eurax Cream
Triamcinolone acetonide — Kenalog-40 Injection

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ALASKA STATE MEDICAL ASSOCIATION
ANNUAL CONVENTION
SITKA, ALASKA
JUNE 5 — 8, 1979

GUEST SPEAKERS

Donald L. Finney, Manager of Forestry and Government Affairs, Louisiana - Pacific Corporation (Ketchikan Division)

Story Musgrave, M.D., Astronaut, National Aeronautics and Space Administration, Houston, Texas

Colman Ryan, M.D., M.R.C.P.I., Assistant Clinical Professor of Medicine and Surgery, University of California, San Fransisco; Chief of Cardiology, Mary's Help Hospital, Daly City; past Chief of the Hypertension Unit, V.A. Hospital, San Fransisco, California

Conway W. Snyder, Ph. D., Viking Project Scientist, Jet Propulsion Laboratory, Pasadena, California

Richard W. Vilter, M.D., Professor of Medicine, University of Cincinnati, College of Medicine and President - Elect, American College of Physicians

Lowell S. Young, M.D., Associate Professor of Medicine, Department of Medicine, Division of Infectious Disease, University of California, Los Angeles

Other Participants

Donald B. Addington, M.D., Plastic and Reconstructive Surgery, Anchorage, Alaska

William Boettcher, M.D., Bone and Joint Surgery, Virginia Mason Clinic, Seattle, Washington

Gary E. Carlson, M.D., Plastic and Reconstructive Surgery, Ketchikan, Alaska

Wilfred A. Cassell, M.D., Staff Psychiatrist, Alaska Psychiatric Institute, Anchorage, Alaska

William Boettcher, M.D., Bone and Joint Surgery, Virginia Mason Clinic, Seattle, Washington

Robert E. Mallin, M.D., Plastic and Reconstructive Surgery, Anchorage, Alaska

Richard G. Parry, M.D., Plastic and Reconstructive Surgery, Fairbanks, Alaska, Scientific Exhibit "Treatment of Chain Saw Injuries to the Face"

Verner Stillner, M.D., M.P.H., Director of Mental Health, Dept. of Health and Social Services, Juneau, Alaska

William W. Wennen, M.D., Plastic and Recon-

TUESDAY, JUNE 5, 1979

3:30-7:00 p.m.	Physicians Registration
3:30 p.m.	Exhibit Booth Assignments & Registration
4:00-7:00 p.m.	ASMA Council Meeting
8:00 p.m.	Sitka Summer Music Festival Special concert for ASMA Convention — Centennial Hall (Complimentary Tickets)
7:30 a.m.-12:15 p.m.	Registration and Ticket Purchase
8:00-10:00 a.m.	ASMA Business Session - Welcoming address by Dr. Worrall
10:00-10:30 a.m.	VISIT EXHIBITS
10:30-11:45 a.m.	SCIENTIFIC SESSION
10:30 a.m.	"The Impact of Alcohol on Nutrition and Blood Formation" Richard Vilter, M.D.
	"Treatment of Hand Fractures by Internal Fixation" Gary E. Carlson, M.D., Ketchikan, Alaska
12:15-1:30 p.m.	Lunch
	"The Timber Industry in Southeast Alaska" Donald L. Finney, Ketchikan, AK.
1:30-2:45 p.m.	ASMA Business Session
2:45-3:00 p.m.	VISIT EXHIBITS
3:00-5:00 p.m.	SCIENTIFIC SESSION
3:00 p.m.	"Medical and Physiological Aspects of Space

Health and Safety Tip

From the American Medical Association

Fitness Important In Middle Years

Stay Fit After 40

Many men and women over 40 fight their own physical fitness. They assume that because of their age they are no longer capable of much physical effort. One of the greatest dangers to men past 40 is falling into sedentary ways.

The American Medical Association points out that the individual past 40 can do something about his or her exercise program, or lack of it.

If not reasonably adept at a specific sport — bowling, golf, tennis, or swimming — take lessons and learn to do at least one individual sport fairly well. Exercise is more fun if it comes incidental to playing a game that is fun.

Take an inventory of physical activity in the course of regular daily activities. This includes activity on the job and at home.

It might include housework, maintenance chores, gardening, or sports. Often these do not provide enough activity.

For the sedentary person who resolves to become more active, a good starting point is walking. This means a brisk posture walk, holding the belt line level and raising the breastbone. Then, in addition to regular physical activities, start devoting part of each weekend to something that you enjoy — golf, tennis, dancing.

Fifteen minutes of exercise every other day is hardly enough to produce noticeable results quickly, but it is a start. Over a period of time, benefits will be evident.

With regular exercise, the sagging, dragging middleager will begin to exhibit a total change in his or her attitude. Meals will be more enjoyable, physical appearance is more vital, life is more interesting.

For the man, or woman past 40 who decides to begin an exercise program, a visit to the physician for a physical examination is advisable, to make certain there are no conditions that would limit exertion.

February, 1979

Frank Chappell
Science News Editor
AMA

	Suits and Portable Life Support Systems" Story Musgrave, M.D.
4:30 p.m.	"Cardiac Awareness in Schizophrenia" Wilfred A. Cassell, M.D. and Verner Stillner, M.D.; Anchorage, Alaska (Presented by Dr. Cassell)
4:45 p.m.	"Surface Replacement of the Hip" William Boettcher, M.D., Virginia Mason Clinic, Seattle, Washington
6:00-7:00 p.m.	Cocktails "Cocktails Courtesy of Pharmaceutical Companies" (Physicians, wives, exibitors and guests invited)
7:00 p.m.	Alaska Academy of Family Physicians — Annual Meeting and Banquet
7:00 p.m.	American College of Surgeons — (Alaska Chapter) Annual Meeting and Banquet

THURSDAY, JUNE 7, 1979

7:30 a.m.-12:15 p.m.	Registration and Ticket Purchase
8:00-10:00 a.m.	ASMA Business Session
10:00-10:15 a.m.	VISIT EXHIBITS
10:15-11:45 a.m.	SCIENTIFIC SESSIONS
10:15 a.m.	"Recognition and Treatment of Gram Negative Sepsis" Lowell S. Young, M.D., Los Angeles, California
11:00 a.m.	"Update on Prevention and Management of Infection in the Compromised Host" Lowell S. Young, M.D., Los Angeles, California
11:30-11:45 a.m.	"Initial Burn Treatment and Transfer Procedures" Robert E. Mallin, M.D. and Donald B. Addington, M.D., Anchorage, Alaska (Presented by Dr. Mallin)
12:15-1:30 p.m.	Luncheon Alaska Medical Political Action Committee (ALPAC) Annual Meeting and Lunch
1:30-2:00 p.m.	VISIT EXHIBITS
2:00-3:00 p.m.	ASMA Business Session
3:00-3:15 p.m.	VISIT EXHIBITS
3:15-5:00 p.m.	SCIENTIFIC SESSION "The Planet Mars, as Revealed by the Viking Spacecraft" Dr. Conway Snyder, Pasadena, California
6:00-7:00 p.m.	Cocktails-Centennial Bldg.
7:00 p.m.	ASMA President's Banquet-Centennial Building Special Entertainment-Sitka Russian Archangel Dancers (Physicians, wives, exhibitors and guests invited)

FRIDAY, JUNE 8, 1979

8:00-9:00 a.m.	ASMA Business Session
9:00-9:15 a.m.	VISIT EXHIBITS
9:15-10:30 a.m.	SCIENTIFIC SESSION "Recent Advances in Evaluation and Treatment of Hypertension" Colman Ryan, M.D., M.R.C.P.I., San Francisco, California
10:30 a.m.	Adjournment
12:00-3:00 p.m.	Lunch Box Cruise on the "St. Aquilina"

EXHIBITORS

Abbott Laboratories
Armour Pharmaceuticals Company
Ayerst Laboratories
Boehringer Ingelheim Ltd.
Bristol Laboratories
Burroughs Wellcome Company
Ciba Pharmaceuticals
Dow Chemical
Eli Lilly & Company
Fitzsimons Army Medical Center
Geigy Pharmaceuticals
Lederle Laboratories
McNeil Laboratories
Merke, Sharp & Dohme
Parke-Davis
Richard Parry, M.D. (Scientific)
Pfizer Laboratories
Pitney Bowes
Roche Laboratories
William H. Rorer, Inc.
Schering Corporation
Searle Laboratories
E. R. Squibb & Sons
Syntex Laboratories, Inc.
The Upjohn Company
William Wennen, M.D. (Scientific)
Wyeth Laboratories

OTHER CONTRIBUTORS

Longs Drug Stores
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The Purdue Frederick Company
A. H. Robins

I wish to express the appreciation of the Alaska State Medical Association to these companies for their support and participation in our 34th Annual Convention.

Sincerely,
Joseph A. Worrall, M.D.
President

SPECIAL GUEST SPEAKERS

DR. STORY MUSGRAVE is working on the design and development of all Space Shuttle extravehicular activity equipment and is in training for furture Space Shuttle missions.

BIOGRAPHY OF STORY MUSTGRAVE, M.D.

Dr. Musgrave is participating in the design and development of all Space Shuttle extravehicular activity equipment including spacesuits, life support systems, airlocks, and manned maneuvering units, and he is training for furture Space Shuttle missions.

He was graduated from St. Mark's School, Southborough, Massachusetts, in 1953; received a Bachelor of Science degree in Mathematics and Statistics from Syracuse University in 1958, a Master of Business Administration degree in Operations Analysis and Computer Programming from the University of California at Los Angeles in 1959, a Bachelor of Arts degree in Chemistry from Marietta College in 1960, a Doctorate in Medicine from Columbia University in 1964, and a Master of Science in Physiology and Biophysics from the University of Kentucky in 1966; and expects to receive a Doctorate in Physiology and Biophysics with minor in Aeronautical Engineering from the University of Kentucky in 1978.

Following graduation from high school in 1953, Musgrave entered the United States Marine Corps and completed basic training at Parris Island, South Carolina. He completed training at the U.S. Naval Airman Preparatory School and the U.S. Naval Aviation Electrician and Instrument Technician School in Jacksonville, Florida. He served as an aviation electrician and instrument technician and as an aircraft crew chief while completing duty assignments in Korea, Japan, Hawaii, and aboard the carrier USS Wasp in the Far East.

He has flown 85 different types of single- and multi-engine civilian and military aircraft, logging over 9,900 hours flying time, including 3,800 in jet aircraft, and he holds instructor, instrument instructor, glider instructor, and airline transport ratings. An accomplished parachutist, he has made more than 330 free falls - - including over 100 experimental free-fall descents involved with human aerodynamics. He holds an International Jumpmaster Class C License and was President and Jumpmaster of the Bluegrass Sport Parachuting Association in Lexington, Kentucky, from 1964 to 1967.

Dr. Musgrave was employed as a mathematician and operations analyst by the Eastman Kodak Company, Rochester, New York, during 1958.

He served a surgical internship at the University of Kentucky Medical Center in Lexington from 1964 to 1965. He continued there as a U.S. Air Force post-doctoral fellow (1965-1966) working in aerospace medicine and physiology and as a National Heart Institute post-doctoral fellow (1966-1967) teaching and doing research in cardiovascular and exercise physiology.

He has written 27 scientific papers in the areas of aerospace medicine and physiology and clinical surgery.

Dr. Musgrave was selected as a scientist-astronaut by NASA in August 1967. He completed astronaut academic training and a year of military flight training. He worked on the design and development of the Skylab Program, was the backup science-pilot for the first Skylab mission, and was a capsule communicator for the second and third Skylab Missions. He was the mission specialist on the first and second Spacelab Mission Simulations. Presently, Dr.

Musgrave is continuing his clinical and scientific training as a part-time surgeon at Denver General and as a part-time professor of physiology and biophysicis at the University of Kentucky Medical Center. In addition he is participating in the design and development of extravehicular equipment for furture Space Shuttle missions.

BIOGRAPHY OF CONRAD SNYDER

Dr. Snyder received the B.A. degree in physicis at the University of Redlands and the M.S. degree in nuclear physics at the State University of Iowa. During World War II, he was a group leader on the research staff of the project at the California Institute of Technology which developed rocket weapons for the Navy.

He received the Ph. D degree in nuclear physics from Caltech in 1948. He spent several years at Oak Ridge, first in the project to develop a nuclear powered aircraft, and then at the Oak Ridge National Laboratory, engaged in the study of nuclear reactions in light elements.

After two years on the faculty of the physics department at Florida State University, he joined the physics section of the Jet Propulsion Laboratory at Caltech in 1956. He has been the principal investigator on three space experiments to investigate the solar wind, namely the Mariner II flyby of Venus (which made the first comprehensive measurements of the solar wind), the OGO 5 earth satellite, and the ALSEP program (Apollo flights 12 and 15). He was the Project Scientist for the Mariner 5 mission.

Since the Viking Project's inception nine years ago, Dr. Snyder has been the Viking Orbiter Scientist, assisting the Viking Project Scientist in the definition, planning, and coordination of the scientific mission of the Project and having prime responsibility for the scientific experiments being carried out by Viking Orbiter. He has worked with the three Orbiter Science Teams and the Radio Science Team to assure that their scientific investigations of Mars are carried out as effectively as possible. In the current phase of the mission, as Viking Project Scientist, his responsibility extends also to the experiments of the Viking Landers on the surface of Mars.

Dr. Snyder is a four-time recipent of the Exceptional Scientific Achievement award from NASA and was awarded a Doctor of Science degree by the University of Redlands.

DR. CONWAY W. SNYDER has been involved in the space program since its beginning as a scientist experimenter and an administrator. He has been the Viking Orbiter Scientist since 1968 and is currently the Viking Project Scientist.

AMA Acts to Strengthen Medical Discipline

A report by the AMA Ad Hoc Committee of Medical Discipline, summarizing the current status of medical discipline in the United States and containing six recommendations for improvements, was adopted at the AMA Clinical Convention in December. Among the recommendations were: increased education in ethics at all levels in medical schools; state medical association participation in reviewing and improving licensure and disciplinary mechanisms; participation by medical leaders in developing effective programs to review the quality of physician-provided care.

Health and Safety Tip

From the American Medical Association

Upsets Can Alter Driving Fitness

Driving Fitness

Are you fit to drive?

Before you automatically reply "Of course," take stock of your mental attitude and physical condition. You may be unsafe behind the wheel, both to yourself and to others on the road.

You may think you are in good health. You may have an excellent safety record. Yet, under certain circumstances, it can be dangerous for you to be in the driver's seat.

The American Medical Association reminds that the emotional stability of the driver is as important as any single factor in maintaining traffic safety. That's why you owe it to others — and to yourself — not to drive when you have serious problems on your mind. If you're thinking about that argument you had before you left home or office; if you're in a depressed or angry "I don't care what happens" mood; if you're very worried about a personal problem, you're better off not driving.

The sleepy driver causes many accidents. In fact, a sleepy driver is as much of a hazard as a drinking one. Dozing at the wheel can occur in broad daylight as well as at night. When making long trips, rest every two hours and drink coffee or cola to stay alert.

Many medicines, not just a few, can affect the way in which you handle the wheel. Certain commonly used drugs such as antihistamines, cold tablets and mild sedatives may dull your reflexes or impair your coordination. Stimulants can make you nervous. Tranquilizing drugs can cloud your judgment and interfere with driving skills. Consult your doctor about the side effects of any drugs you take.

Driving calls for clear, healthy eyesight, good side vision, judgment of distance and the ability to see well at night. Have your eyes tested regularly. If you have glasses for distance vision, don't forget to wear them.

If you have a nervous disorder or a heart condition, ask your doctor whether you are a safe driver. This also applies as you get older. Past 65, reflexes and coordination tend to be somewhat slower.

February, 1979

Frank Chappell
Science News
Editor
AMA

ROCHE

For recurrent attacks of urinary tract infection in women

Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

Just one tablet b.i.d. for 10 to 14 days

- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice
- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register,* 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

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***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
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hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported, should these occur, discontinue drug. Isolated reports of neutropenia, jaundice, periodic blood counts and liver function tests advisable during long-term therapy.

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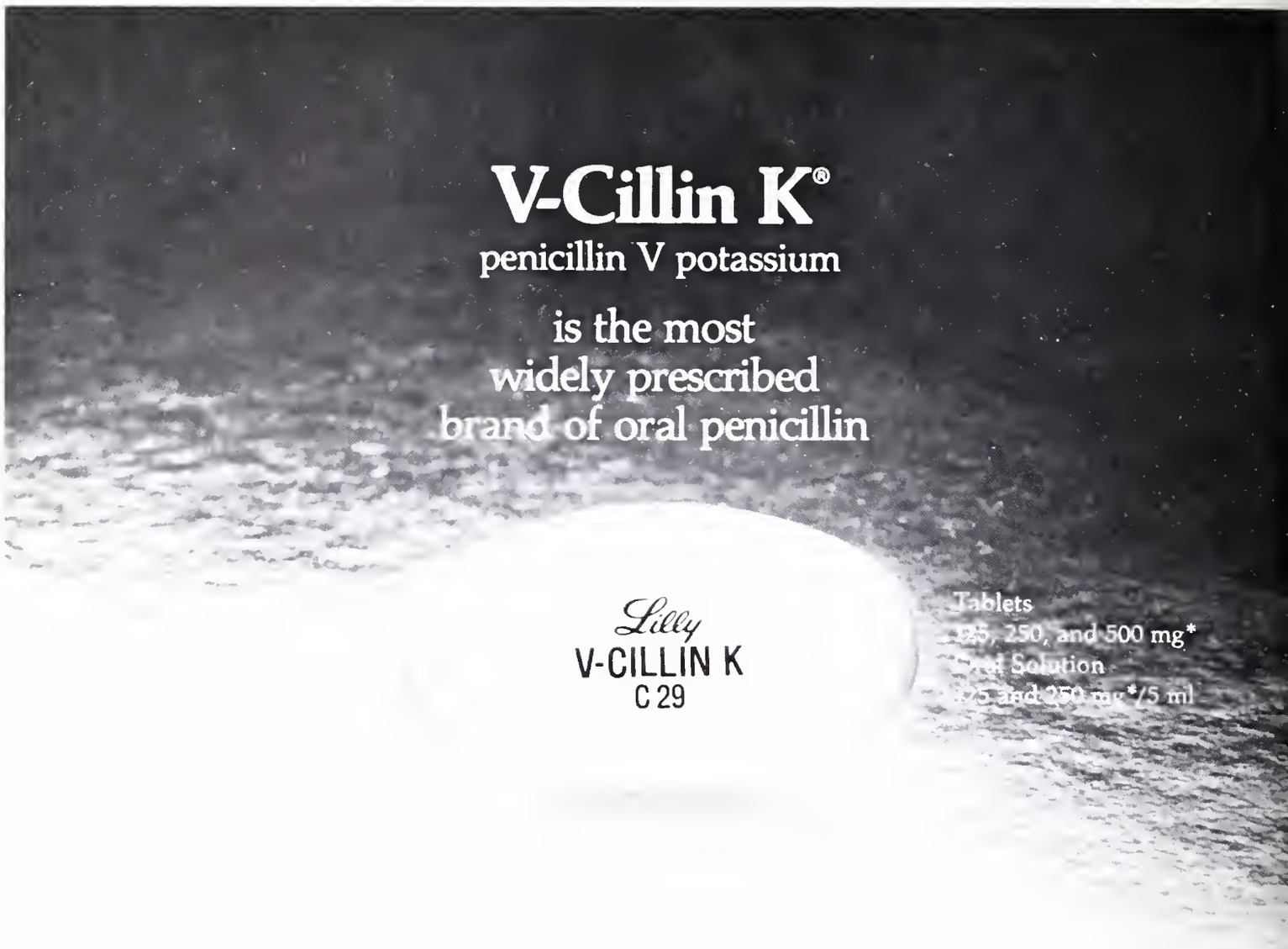

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PARENTERAL NUTRITION WITH GLUCOSE AND LIPIDS

Howard Silberman, M. D.

The ability to deliver intravenously all required nutrients for normal growth and development and homeostasis was brought to clinical fruition by Dudrick and his associates[1] in 1968. Infusion of essential nutrients by vein in patients with alimentary tract dysfunction averts the ravages of malnutrition and starvation, and, therefore, represents one of the great advances in the management of seriously ill patients. A calorie source plus a protein source are the basic elements in all parenteral nutrition protocols. In addition, required electrolytes, vitamins, and trace elements are also provided. The caloric requirements of a given individual are closely tied to the pathologic state with which that patient presents. Patients merely at bed rest may require only 25-35 kcal/kg to maintain homeostasis whereas patients who have sustained severe trauma or burns may require as many as 55-80 kcal/kg in order to heal the injured tissues. Protein requirements for adults range between 1-2 gm/kg per day. Maximal utilization of provided nitrogen requires the provision of at least 100-200 kcal/gm of nitrogen.

THE GLUCOSE SYSTEM

The system of parenteral nutrition originally described by Dudrick uses glucose as the exclusive caloric source and synthetic amino acids as the protein source. The consituents of the glucose system are outlined in Table 1. Each liter of solution so prepared provides 850 non-protein kilocalories per liter. Because of the high concentration of glucose in this form of parenteral nutrition, therapy should be begun gradually to avoid hyperglycemia. Consequently, it is recommended that on the first day of treatment one liter of the nutritional solution be infused at a constant rate over the full 24 hour period. During that time the patient's urine should be tested for the presence of glucose, and the blood sugar level should be determined frequently during that day. If this amount of glucose is well tolerated, on the second day a second liter of nutritional solution is added. Now the two liters are infused at a constant rate over the 24 hour period. Again if this volume and amount of glucose are tolerated, on the third day a third liter is added. Three liters per day is the usual prescription for the adult patient.

Table 1

THE GLUCOSE SYSTEM

Preparation Of One Liter

500 ml 8.5% Crystalline Amino Acids
500 ml 50% Glucose

Additives:

Sodium (as Acetate)	45 mEq
Potassium (as Chloride)	35 mEq
Potassium (as Acid Phosphate)	5 mEq
Magnesium (as Sulfate)	8 mEq
Calcium (as Chloride)	5 mEq
Multiple Vitamins (M.V.I.)	5 ml/day

The concentration of the infusate in the glucose system exceeds 2000 m0sm/liter. Consequently, these solutions cannot be safely administered through peripheral veins but must be infused into a central vein where rapid blood flow quickly dilutes the concentrated solution. Indwelling catheters used for this purpose are as short as possible and are introduced percutaneously at a site which allows for a secure dressing that minimizes dislodgement and contamination. Percutaneous subclavian catheterization with attachment of the

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apparatus to the anterior chest wall best meets these requirements. The catheter (Deseret 3162) is inserted using aseptic technique - surgical skin preparation, draping, and gloves. The procedure can be safely carried out at the bedside with the patient in the Trendelenburg position. The elevated venous pressure associated with this position increases the diameter of the vein for greater ease of cannulation and also minimizes the risk of air embolus. Following introduction of the catheter a portable chest film is taken to confirm the proper location of the catheter in the superior vena cava and to identify any pneumothorax or hemothorax that may be present. The insertion of the catheter, the application of the initial dressing over the apparatus, and the subsequent management of the catheter and the dressing for the duration of treatment are key aspects in the safe management of patients receiving this form of parenteral nutrition. The catheter is sutured to the anterior chest wall after which a providone-iodine ointment is applied to the catheter entrance site. A small gauze dressing is applied at the entrance site and then an air-tight adhesive dressing is applied. Dressings should be changed regularly (eg. three times per week) using the same aseptic surgical technique as described for introducing the catheter. The catheter should be used exclusively for the infusion of the nutrient solution. Should fever develop which cannot be reasonably attributed to the underlying pathology the catheter should be removed. In addition, the tip of the catheter and the nutritional solution should be cultured.

THE LIPID SYSTEM

Recently, a new isotonic caloric source, a 10% fat emulsion (Intralipid) has become available in the United States thereby permitting formulation of a parenteral nutrition system that can be administered via peripheral veins. The aim of a protocol for a lipid system of total parenteral nutrition is to maximize calorie and protein content without sacrificing safe peripheral venous administration.

Intralipid 10% fat emulsion contains 10% soybean oil, 1.2% egg yolk phospholipids, 2.25% glycerin, and pyrogen free water. The soybean oil is a refined natural product consisting of a mixture of neutral triglycerides of predominantly unsaturated fatty acids. The major component fatty acids are linoleic (54%), oleic (26%), palmitic (9%) and linolenic (8%). Ten percent fat emulsion provides 1.1 kcal/ml, of which 0.1 kcal is derived from glycerin. Because the addition of other nutrients to the soybean oil emulsion may disturb the latter's stability, the other components of this nutritional system are prepared separately in a second bottle.

In the system devised at the Los Angeles County-University of Southern Calfornia Medical Center[2], a one liter nutritional unit consists of bottle A, 500 ml 10% fat emulsion, and bottle B, containing a 500 ml solution which is 5.95% with respect to synthetic crystalline amino acids and 10% with respect to glucose (Table 2).

In addition, appropriate electrolytes as well as heparin, and vitamins are added to bottle B. The lipid system of parenteral nutrition provides 720 non-protein kcal/liter. Because the amino acid-glucose-additive solution (bottle B) contains over 1,500 m0sm per liter the feasibility of peripheral venous administration of the lipid system depends on the dilutional and venous coating effects of the isotonic 10% fat emulsion (bottle A). Consequently, the simultaneous administration of the contents of bottles A and B at the same rates of infusion is of great importance.

Table 2

THE LIPID SYSTEM

Preparation Of One Liter

Bottle A
500 ml 10% Fat Emulsion

Bottle B
500 ml 5.95% Crystalline Amino Acid-10% Glucose

Additives:

Sodium (as Acetate)	45 mEq
Potassium (as Chloride)	40 mEq
Magnesium (as Sulfate)	8 mEq
Calcium (as Gluconate)	5 mEq
Heparin	1000 Units
Multiple Vitamins (M.V.I.)	5 ml/day

When infused in this way the vein is perfused with a solution containing about 900 m0sm/liter per liter, nearly uniformly tolerated. The addition of 1,000 units of heparin in bottle B further minimizes the incidence of phlebitis. When the contents of bottle A are inadvertently infused more rapidly than those of bottle B the remaining amino acid-glucose-additive solution should be discarded and a new liter unit started.

Therapy is started by infusing 500 ml 10% fat emulsion alone during a 4-8 hour period to note any severe adverse reactions. Fever, chills, sensation of warmth, shivering, vomiting, and chest or back pain are among the few side effects occasionally reported. Patients who tolerate the test dose may there-

after receive a 1 liter-unit of nutritional solution, and an additional unit each day, up to a total of 3 to 4 liter-units per day for the average adult patient.

CHOOSING BETWEEN THE GLUCOSE AND LIPID SYSTEM

The two systems of parenteral nutrition, the glucose system and the lipid system, both have advantages and disadvantages. The glucose system provides 850 non-protein kcal/liter exclusively of glucose origin. In contrast, the lipid system provides only 720 non-protein kcal/liter of which about two-thirds are of lipid origin. The lipid system also provides somewhat less protein and nitrogen, but its lesser concentration allows safe peripheral administration whereas the greater concentration of the glucose system requires central venous administration (Table 3).

Table 3

NUTRIENTS IN THE LIPID AND GLUCOSE SYSTEMS

	LIPID SYSTEM	GLUCOSE SYSTEM
CARBOHYDRATE CALORIES	220/LITER	850 /LITER
LIPID CALORIES	500/LITER	----------
TOTAL NON-PROTEIN CALORIES	720/LITER	850/LITER
NITROGEN PROVIDED	4.4 GM/LITER	6.25 GM/LITER
PROTEIN EQUIVALENT	27.3 GM/LITER	39 GM/LITER
CONCENTRATION (APPROXIMATE)	900 m0sm/LITER	2000 m0sm/LITER

There is some controversy in the literature concerning the relative efficacy of lipid and glucose calories. In a recent controlled, randomized comparison of the glucose and lipid systems in non-septic patients, Jeejeebhoy and associates[3] found that the nitrogen balance with both systems was positive to a comparable degree after the establishment of equilibrium. Despite these findings some investigators still dispute the comparable efficacy of the lipid calorie[4]. Assuming the validity of the Jeejeebhoy study certain guidelines can be drawn concerning which one of the two systems may be preferable in a given patient. In patients with some degree of fluid intolerance, as in congestive heart failure or oliguric renal failure, the glucose system would allow delivery of more calories in the given tolerable volume. It seems unwise to infuse lipids in a patient with an underlying hyperlipemia. Patients with peripheral veins inadequate to support infusion for 30-40 days, the usual period of treatment with parenteral nutrition, should receive the glucose system because the sole advantage of the lipid system is its ability to be infused peripherally. Sepsis evidently impairs the utilization of lipid calories and, consequently, the glucose system is recommended in these patients[5]. It should be noted, however, that although the glucose system is recommended the use of this system in septic patients may be associated with a somewhat increased risk because of possible infection of the subclavian catheter and the potential for this foreign body to then become a secondary seeding source of infection. Nevertheless, many septic patients have greatly benefited from parenteral nutrition.

A patient with a tracheostomy is at increased risk when receiving the glucose system because of the close proximity of the tracheostomy stoma with its inevitably infected secretions to the subclavian catheter and dressing. Consequently, the lipid system may be preferable in these patients. The lipid system may also be preferable in patients with respiratory failure so severe that the occasional pneumothorax associated with the introduction of a subclavian catheter might result in death.

PATIENT MONITORING

Patients receiving parenteral nutrition should be closely monitored. Determination of body weight and tests for glucosuria should be done daily. When therapy is initiated hemoglobin, serum electrolytes (including magnesium, calcium, and phosphorous), urea, creatinine, and blood sugar should be determined daily for one week, and thereafter, if these parameters are stable, twice weekly for the duration of treatment. Liver function tests and determination of serum albumin should be carried out initially and then at regular intervals. In addition, lipid profiles should be obtained initially and then at regular intervals in patients receiving the lipid system.

Twenty-four hour urine collections for nitrogen or urea allow calculation of nitrogen balance. Immunocompetence can be assessed using standard skin test antigens (eg. PPD, mumps, Candida, streptokinase). These tests should be applied prior to starting therapy and repeated every two weeks if anergy is

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demonstrated initially.

COMPLICATIONS

Morbidity associated with total parenteral nutrition may include complications of subclavian catheter insertion, catheter sepsis, and metabolic derangements. A wide variety of complications have been described associated with inserting a subclavian catheter. In experienced hands these complications are unusual. The commonest problem is pneumothorax which has a reported incidence of about 3% in large series. Infection associated with parenteral nutrition may be related to a break in technique when introducing the subclavian catheter, or breaks in technique in maintaining the catheter and its dressing after the catheter has been successfully introduced. Infection may also be related to contamination of the nutritional solution during preparation. The sepsis rate in large series is about 3%.

Since patients receiving total parenteral nutrition receive all their nutrients at the prescription of the physician, every nutritional excess and deficiency state can be iatrogentically produced.

The commonest metabolic derangements are listed in Table 4. Hyperglycemia, occurring more commonly in those patients receiving the glucose system, may be due to diabetes mellitus. Rapid increases in the infusion rate may produce hyperglycemia even in normal persons. High blood sugar may also be associated with a transient, relative, insulin resistance due to severe trauma, the administration of cortocosteroids, or sepsis. Hyperglycemia associated with overt diabetes mellitus is managed by the administration of insulin which is usually added to the nutritional infusate at the time of preparation. Patients with hyperglycemia associated with insulin resistance also receive insulin, but glucose metabolism should be assessed frequently because as the patients' clinical condition improves the insulin resistance resolves and unless the dosage of insulin is reduced hypoglycemia occurs. It is critically important to avoid abrupt changes in the rate of infusion in patients receiving the glucose system. Rapid increases in the infusion rate, for example to "catchup," may result not only in hyperglycemia but hyperglycemia of such magnitude as to produce hyperosmolar nonketotic coma. On the other hand, abrupt decreases in the rate of infusion (especially after a previous increase) will produce hypoglycemia.

Table 4

METABOLIC DERANGEMENTS

Hyperglycemia
Hypoglycemia
Hypokalemia
Hypophosphatemia
Hypomagnesemia
Trace Element Deficiencies
Essential Fatty Acid Deficiency
Hyperammonemia
Liver Dysfunction
Vitamin Deficiencies
Hypervitaminosis A
Hypervitaminosis D
Iron Deficiency
Anemia

Deficiency states of the major intracellular ions, including potassium, phosphate, and magnesium, develop in the absence of adequate supplementation because as the anabolic state is achieved these ions move from the extracellular fluid into the cell. These deficiency states are best avoided by the routine addition of adequate amounts of potassium, phosphate, and magnesium to the parenteral nutrition solution.

Trace element deficiencies, especially of copper and zinc, are reported with increasing frequency. Blood transfusions or administration of plasma do not prevent such deficiency states from developing. The daily intravenous requirements for these elements are not well defined for adults. Based on estimates in the literature, 1 ml/kg of a solution containing the following trace elements is added to one liter per day of either the glucose of the lipid (bottle B) system after 2-3 weeks of treatment: cobalt, 0.014 mg/ml; manganese, 0.04 mg/ml; zinc, 0.04 mg/ml; iodine, 0.015 mg/ml; copper, 0.022 mg/ml.

Fatty acid abnormalities have recently been identified in patients receiving the glucose system for prolonged periods. Such patients develop a deficiency of linoleic acid, and essential fatty acid, which is manifest most commonly as a disseminated desquamative dermatitis. To prevent the development of this deficiency state, patients receiving the glucose system for prolonged periods, for example, longer than three weeks, now receive one liter of the 10% fat emulsion per week. In this case, the fat emulsion is used not as a caloric source but as a source of linoleic acid.

INDICATIONS

In general, total parenteral nutrition is indicated for patients in whom oral alimentation has been withheld for one week and in whom the potential for resumption for oral alimentation in the subsequent week is remote. In

addition, certain diseases appear to benefit specifically from total parenteral nutrition.

Management of gastrointestinal fistulae has been revolutionized with the advent of total parenteral nutrition. Prior to the ability to support individuals intravenously mortality rates a high as 65% were associated with enterocutaneous fistulae. In the first series of such patients treated with parenteral nutrition, MacFadyen and associates[6] reported a mortality rate of 7%. In addition, these investigators found that nearly 70% of such fistulae closed spontaneously with nutritional support and total bowel rest. Similar reports have confirmed the salutary effect of total parenteral nutrition in these patients although the mortality and spontaneous closure rates have not been quite as optimistic as those achieved by MacFadyen. At the Los Angeles County-University of Southern California Medical Center 31 patients bearing 35 fistulae were managed over a three year period with the glucose system, the lipid system, or both systems in sequence. These patients received total parenteral nutrition from six to 129 days (mean, 33.7 days). A spontaneous closure rate of 51% was achieved. Nine of the 31 patients died (29%). It is recommended that all patients with enterocutaneous fistulae undergo a period of parenteral nutrition and total bowel rest for 30-40 days prior to undertaking a surgical approach to the closure of these fistulae.

A normal state of nutrition can be restored in patients with inflammatory bowel disease allowing them to tolerate an operative procedure with less risk. In addition, parenteral nutrition may induce a significant rate of remission in patients with Crohn's disease. At the University of Pennsylvania[7], 40% of patients with Crohn's disease who were regarded as medical failures achieved remissions when total bowel rest and total parenteral nutrition were instituted. At Washington University[8] all nine patients treated with bowel rest and total parenteral nutrition achieved remissions lasting from four months to three years. In this disease the ability to put the bowel at complete rest seems to be as important as providing sufficient calories.

Patients with severe pancreatitis have been shown to be malnourished by a variety of parameters. Therefore these patients may benefit from intravenous nutritional support. In addition, exocrine secretory function of the pancreas is substantially reduced when oral alimentation is withheld from such patients and they receive all of their nutrients by vein. It seems likely, therefore, that patients with severe pancreatitis will benefit from parenteral nutrition.

Dudrick[9] modified the Giordano-Giovanetti oral hemodialysis diet for intravenous use in patients with renal failure in whom there was also severe alimentary tract dysfunction. Using a solution of essential amino acids combined with high centrations of glucose Dudrick formulated a solution that provides 1190 nonprotein calories in 755 milliliters, a volume usually tolerated in patients with oliguric renal failure (Table 5). In a series of patients with renal failure managed with such a program, Dudrick found that not only could nutrition be restored with improved wound healing and the closure of fistulae but the serum urea and potassium levels were stabilized and in some patients actually decreased making the metabolic management of these patients simpler.

Table 5

PARENTERAL NUTRITION IN RENAL FAILURE

Preparation

500 ml 70% Glucose
250 ml 5.1% Essential L-Amino Acids
5 ml Multiple Vitamins (M.V.I.)

The use of total parenteral nutrition in patients with disseminated malignancy is a relatively new indication for which the results are still tentative. Data available to date indicate that parenteral nutrition can restore nutrition in cancer patients, improve wound healing, and promote the closure of fistulae. In addition, a period of parenteral nutrition allows the administration of anti-tumor therapy to some patients who would otherwise be denied treatment because of severe malnutrition. Parenteral nutrition may reduce the morbidity of chemotherapy and radiotherapy and may actually enable the delivery of greater doses of chemotherapy. There is some preliminary data that suggest that parenteral nutrition may even enhance the response to chemotherapy[10]. It has been found that many patients with metastatic malignancy demonstrate some degree of immunodepression as assessed, for example, by anergy to standard skin tests. Available data indicate that at least part of this immunodepression of malignancy may be on a nutritional basis, and this component of immunodepression can be successfully reversed by correcting malnutrition parenterally[11]. Available information indicates that parenteral nutrition may stimulate tumor growth in animals but this has had no adverse clinical consequences to date[12].

Use of parenteral nutrition solutions in patients with liver failure is still under investigation. Data indicate that many patients with severe liver failure and hepatic encephalopathy have an imbalance of serum amino acids with a high level of the aromatic amino acids and a deficiency state of the branched-chain amino acids. Smith and associates[13] found that when solutions rich in branched-chain amino acids are administered with consequent restoration of the serum pattern to normal, hepatic encepholopathy may dramatically resolve. Such solutions of amino acids are not yet commercially available.

Patients with the short bowel syndrome require intravenous nutritional support until adaptive hyperplasia of the remaining small bowel mucosa allows absorption of sufficient nutrients to support life. Although parenteral nutrition can provide the essential nutrients to such patients adaption of the small bowel requires oral feedings. Consequently oral feedings and parenteral nutrition must be given concurrently until sufficient adaption has taken place to allow discontinuation of the intravenous nutritional support. In patients with massive small bowel resections or inflammatory bowel disease so extensive as to preclude oral alimentation indefinitely or permanently, parenteral nutrition can support life indefinitely on an out-patient basis ("home hyperalimentation") using a special silicone catheter (Broviac catheter) which is brought out to the skin surface through a subcutaneous tunnel designed to minimize ascending infection.

CONCLUSION

Total parenteral nutrition represents one of the most valuable additions to the physician's therapeutic armamentarium in recent years. It is a great boon to many seriously ill hospitalized patients and has applicability in the primary or adjunctive management of a wide variety of pathologic entities. In addition, parenteral nutrition is essential in patients with permanent, extensive alimentary tract dysfunction.

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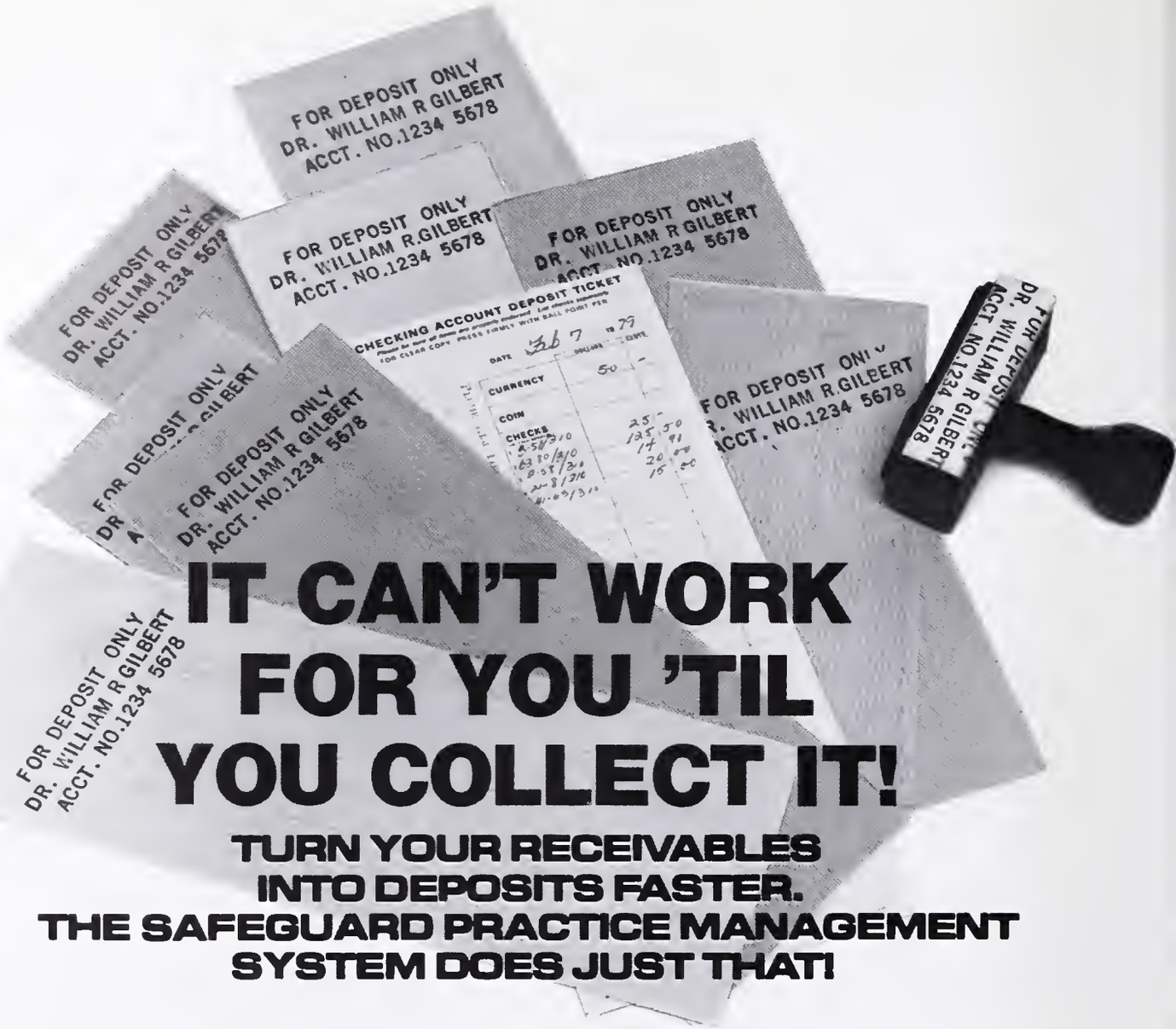

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LITHIUM FOR THE TREATMENT OF AFFECTIVE ILLNESSES

Paul S. Rostykus
Verner Stillner, M.D. MPH

Lithium therapy is the treatment of choice for acute mania and for prophylaxis against manic or depressive episodes in patients with bipolar affective (manic-depressive) illness. Because lithium is commonly used, is effective, and is potentially toxic, all physicians should have a general knowledge of lithium therapy. The purpose of this review article is to provide the Alaskan practitioner with the essentials of lithium therapy.

History

Lithium, the lightest alkali metal, was discovered in 1817. Lithium bromide was used in the mid 1800's in the treatment of gout, and, at the turn of the century, as a hypnotic, sedative and anticonvulsant and in a variety of proprietary medicines. Medicinal use of lithium declined during the first half of the 20th century until 1949, when Cade[1], an Australian psychiatrist, reported the dramatic relief of symptoms in manic patients treated with lithium. In the U.S., at the same time, lithium gained reputation as a dangerous drug because of several cases of lithium intoxication following the ingestion of large doses of lithium containing salt substitutes. During the 1950's and 1960's, lithium was widely studied and used clinically in Europe and Australia. Only since the initial Food and Drug Administration (FDA) licensing in 1970 has lithium begun to gain widespread acceptance in medical practice in the United States.

Pharmacology

Lithium is a normal trace element in the human body, but is undetectable using routine clinical techniques. Lithium salts are readily water-soluble and virtually 100% absorbed from the gastrointestinal tract. Lithium is widely distributed throughout the total body water space, at varying rates. Unlike sodium and potassium ions, lithium ion is distributed equally across cell membranes. Lithium excretion is 95% renal. 70-80% of the filtered lithium is reabsorbed in the proximal tubule in conjunction with sodium. As insignificant amount is reabsorbed in the loop of Henle and distal tubule. Excretion in saliva, sperm, feces, and sweat accounts for the other 5%. Peak serum levels occur at 1-3 hours after oral lithium administration. The half life (T1/2) ranges from 18 hours in young people to 36 hours in some elderly persons.

Lithium ion has several biochemical effects. Because lithium ion has chemical properties similar to both the monovalent cations sodium and potassium and the divalent cations calcium and magnesium, it may act as an ion substitute altering ion channels in membranes, cellular proteins or local ion concentrations. Lithium has been shown to inhibit the release of dopamine and norepinephrine at the presynaptic membrane in several parts of the brain and to alter the turnover and uptake of these two neurotransmitters. Lithium also inhibits the hormone-sensitive adenyl cyclase, especially in the kidney and thyroid. Changes in the turnover of other neurotransmitters and in the metabolism of carbohydrates, fats, and proteins have been suggested, but are of unknown significance. The exact biochemical mechanisms of lithium's effect on mood and behavior are as yet unelucidated[2] .

Drug Interactions

Numerous drug interactions involving lithium have been reported, but only a few of these

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have been shown to be of clinical significance. Low sodium diets increase the tubular reabsorbtion of both sodium and lithium, thus increasing the risk of lithium toxicity. Diminished distal tubular sodium reabsorption by the thiazide diuretics, the "loop" diuretics furosemide (Lasix) and ethacrynic acid, and the "potassium-sparing" diuretics spironolactone, triamterene, and amiloride leads to a compensatory increase in the proximal tubular reabsorption of sodium, and thus lithium, predisposing the patient to lithium toxicity. Nephrotoxic drugs, notably antibiotics[3], may also increase the risk of lithium toxicity. Neurotoxicity has been reported following the use of lithium with high doses of neuroleptics, but at least one study has failed to verify this finding[4]. Prolonged neuromuscular blocking has been observed in patients on lithium who were treated with either pancuronium bromide[5] or succinylcholine[6].

As with all drug use, the physician should be alert for possible drug interactions and be ready to modify dosages accordingly.

Indications

Lithium ion has been shown in several controlled, random, double blind studies to be an effective treatment for acute mania[7-10] and for prophylaxis in bipolar affective (manic-depressive) illness[11-13]. There is supporting evidence that lithium may be effective in the treatment of unipolar recurrent depressive disorder, acute depression refactory to conventional therapies, the affective component of schizoaffective disorder, depression with alcoholism[14], thyrotoxicosis, and the syndrome of inappropriate anti-diuretic hormone (ADH) secretion. Lithium therapy for these possible indications needs further evaluation and should be considered experimental. A wide variety of other psychiatric and non-psychiatric disorders have been treated with lithium, without conclusive results. Currently, lithium has been approved by the FDA only for the treatment of acute mania and for the prophylaxis against manic and depressive episodes in patients with bipolar affective illness[2].

Contraindications

Toxic effects of lithium are likely to occur in a number of clinical settings. Decreased renal lithium clearance occurring with low sodium diets, diuretic therapy, dehydration, and renal insufficiency (due to age or disease) increases the risk of lithium toxicity. Patients with brain damage may develop neurotoxicity even with low lithium levels. Minimal experience has accrued regarding the use of lithium in children.

Lithium has been reported to have a teratogenic effect in non-mammalian animals. In humans lithium has been associated with a change in the type of birth defects noted, but not with an increase in total birth defects. Infants born of mothers treated with lithium are more likely to have congenital heart disease, especially tricuspid valve malformations such as Ebstein's anomaly[15].

During gestation maternal lithium clearence increases necessitating an increase in dose. At delivery the lithium clearence drops abruptly requiring a decrease in lithium dose to prevent toxicity. Lithium crosses the placenta easily[16] and is secreted in human breast milk[17].

In summary, lithium may be administered to patients with cardiovascular disease, with impaired renal function, with hypertension, with evidence of brain damage, during pregnancy, or who are elderly when clear indications are present and special precautions are taken. Precautions include frequent monitoring of lithium levels, frequent and careful observation for signs and symptoms of lithium toxicity by the physician, the patient, and the family, stablilization of the underlying disorder, and more frequent, but smaller doses to minimize fluctuating lithium levels. For use during pregnancy lithium levels must be reduced at birth, both mother and infant should be observed for signs of toxicity, and women on lithium should not breast feed their infants.

Adverse Reactions

Because lithium has a low therapeutic index it is imperative the physician be alert for the adverse reactions of lithium and know how to treat intoxication.

Side effects occur with serum lithium levels in the therapeutic range of 0.8-1.5 mEq/1. Most of these side effects are not harmful and disappear after the first few months of treatment. Bothersome effects can usually be eliminated by a slight reduction in lithium dosage. A fine finger or hand intention tremor is often noted by the physician and occasionally by the patient. Propranolol, 10-40 mg. t.i.d. or q.i.d., may be used to reduce a disabling tremor in some patients[18].

About half of the patients note polyuria or polydipsia; the result of lithium-induced nephrogenic diabetes insipidus (syndrome of inappropriate ADH secretion)[19]. Recent studies have reported that the lithium-induced impairment in renal concentrating ability is associated with the histological changes of glomerular sclerosis and tubular atrophy. These changes suggest that long-term lithium therapy may result in a slow, but irreversible loss of renal

function[20].

Patients may also report symptoms of vomiting, diarrhea, fatigue, sleepiness, malaise, muscular weakness, bradykinesia, rigidity, or cogwheeling[21]. 6-8% of paitents treated with lithium will develop a goiter; 2-5% will develop hypothyroidism, which is esily treated with oral thyroxine[22] Laboratory studies may show a mild to moderate leukocytosis, ECG changes similar to those due to hypokalemia such as T-wave flattening or inversion, a generalized slowing of the electroencephalogram, and low triiodothyronine and thyroxine levels. Lithium therapy has rarely been associated with the development of weight gain, edema, cardiac dysrhythmias, diabetes mellitus[23,24], and dermatological problems including acne, alopecia, hyperkeratotic papules, and a maculopapular rash.

As serum levels rise above 1.5 mEq/1 lithium toxicity develops. Neurotoxicity occurs most commonly, presenting as a worsening of the side effects, dysarthria, ataxia, muscular fasciculations, hyperreflexia, flaccidity, nystagmus, choreoathetosis, delirium, seizures, coma, irreversible brain damage or death. A coarse hand tremor,cardiac dysrhythmias, and uremia or proteinuria may also occur.

Lithium intoxication may be caused by overdose, by a change in sodium balance (vomiting, diuresis, dehydration, dieting, diaphoresis[25], febrile illness, or diarrhea), or by a change in renal function (childbirth). Treatment principles for lithium intoxication involve treating the underlying cause, stopping the administratjion of lithium, removing lithium from the body, and frequently monitoring serum electrolytes and renal function.

The treatment of mild toxicity in an alert and ambulatory patient with serum levels of 2-4 mEq/1 involves temporarily discontinuing the lithium, assuring normal renal sodium and lithium clearance by the administration of electrolyte drinks and intravenous lithium, sodium, and creatinine levels.

Patients with lithium levels of greater than 4 mEq/1 and those who are delirious or comatose with serum levels of 2-4 mEq/1 should be treated in an intensive care setting with some additional measures. Unabsorbed lithium can be removed by the induction of emesis in a conscious patient or gastric lavage with an endotracheal tube in place. Hemodialysis of peritoneal dialysis, if available, should be initiated, to quickly reduce tissue lithium levels. If dialysis is not available, diuresis should be induced wiht mannitol, aminophylline, acetazolamide, or sodium bicarbonate. Thiazide diuretics, furosemide (Lasix), ethacrynic acid, spironolactone, triamterene, and amiloride must not be used for diuresis because they may actually increase lithium reabsorption. Careful attention to the patient's fluid and electrolyte balance and to nursing needs must occur throughout the treatment.

Lithium intoxication, while serious, is fortunately an unusual occurrence. Prevention of intoxication can best be accomplished by adequate patient education about the cause and symptoms of lithium poisoning.

Principles of Therapy

A careful pre-treatment evaluation should be performed before a patient is treated with lithium.

The first step is to establish a clear indication for lithium therapy: a definitive diagnosis of bipolar-affective illness or acute mania must be made. A summary of the DSM-III operational criteria for the diagnosis of these conditions follows[26]:

A bipolar-affective illness has as its essential feature episodes of both mainia and depression. The prevalence rate is 0.5-1%, suggesting that 2000-4000 Alaskans are afflicted with this disorder making it as common as epilepsy. The disease usually has an onset prior to the age of 30 and has a sex ratio of 1:1. Patients with this disease often have a strong family history of bipolar-affective illness and tend to have a premorbid cyclothymia personality. Acute mania or a manic episode involves:

1) a period of elevated, expansive or irritable mood;
2) at least 3 of the following symptoms:
   a) more active than usual,
   b) more talkative than usual,
   c) flight of ideas or racing of thoughts,
   d) inflated self-esteem,
   e) decreased need for sleep,
   f) distractibility,
   g) buying sprees, sexual indiscretions, foolish business investments, or reckless driving.
3) the episode lasts for at least 1 week or the patient is hospitalized.

A depressive episode involves:

1) a dysphoric mood or pervasive loss of interest in pleasure;
2) at least four of the following symptoms:
   a) unintentional change in appetite with an associated weight change of at least 1 lb. per week or 10 lbs. per year;
   b) insomnia or hypersomnia,
   c) fatigue or lethargy,
   d) psychomotor agitation or retardation,

e) loss of interest or pleasure in usual activities,
f) feelings of worthlessness, guilt, or self reproach,
g) slow thinking or indecisiveness,
h) recurrent thoughts of suicide or suicidal behavior;

3) excludes simple bereavement following loss of a loved one, consistent with one's subcultural group;
4) and must be of at least one week's duration.

In both mania and depression the symptoms must not be due to drug intoxication (including alcohol), an organic brain syndrome, or schizophrenia. Manic and depressed patients may present with hallucinations or with delusions of persecution or grandeur. Clinical evidence suggests that many patients with bipolar-affective illness have been and are being misdiagnosed as having schizophernia[27].

Clinical factors associated with a positive response to lithium therapy[28] include a definitive diagnosis of bipolar-affective illness, a family history of bipolar-affective illness and successful treatment with lithium, less than 4 episodes of mania or depression in one year, a "grandiose-elated" picture during manic episodes, phychotic symptoms during both manic and depressive episodes and a patient who is cooperative and reliable enough to maintain compliance.

The patient's history, physical examination, and laboratory studies must be evaluated for contraindications or risk factors including evidence of renal, cardiovascular or thyroid disorder, hypertension, brain damage, pregnancy, diuretic therapy, or low sodium diet. Every patient should have as a basic pretreatment screen serum creatinine, triiodothyronine (T3), throxine (T4), sodium, and potassium levels measured. Patients over 40 should have a baseline ECG recorded. A pregnancy test may be advisable in women of childbearing age. Additional medical workup may be indicated if evidence of an underlying disorder is present.

Patients and their families should be informed of lithium's side effects, the signs and symptoms of intoxication, precautions to minimize the risk of intoxication, and what to do if intoxication occurs. Women of childbearing age should be informed of lithium's possible effects on the fetus, educated about the available methods of contraception, and provided with the contraceptive of their choice. Finally, all of the patient's physicians should be notified that the patient is taking lithium.

In the U.S. lithium ion is available in capsules or tablets containing 300 mg of lithium carbonate, 8.12 mEq of lithium. The tablets are scored for fine dosage adjustments and are usually less expensive than capsules, but some patients suffer more gastrointestinal disturbances from tablets, even when taken with meals[29]. Lithium is usually given in divided doses, despite its long half-life, to minimize the side effects of transient high serum levels.

Because of lithium's low therapeutic index body levels of the drug must be checked carefully, especially during dose adjustment. Lithium levels are easily and quickly measured by flame emission photometry or atomic absorption spectrophotometry, a technique available in almost any lab that measures sodium and potassium levels. Serum levels are measured 12 hours after the last dose, to allow correlation with the standard clinical protocol.

During acute manic episodes patients are usually started on lithium while hospitalized. A neuroleptic is added to cover the patient during the 5-10 day period before the lithium takes effect. The initial dose is 900-1200 mg. of lithium carbonate in divided doses of 300 or 600 mg. The dosage is then titrated until the manic episode is controlled or toxicity occurs. The daily therapeutic dose ranges from 1-3 grams of lithium carbonate per day. Serum lithium levels, drawn daily 12 hours after the last evening dose and before the first morning dose, should be kept between 1.0 and 1.5 mEq/1. The therapeutic goal is a reduction in the intensity and duration of the mania when compared to previous episodes. An adequate trial of lithium requires the maintenance of therapeutic lithium levels for 3 weeks. When the mania "breaks", the dose should be decreased to a prophylactic level.

Lithium prophylaxis for bipolar-affective illness is usually initiated immediately following a manic episode. If lithium therapy is being initiated 600-900 mg. of lithium in divided doses is administered and the dose then titrated to the prophylactic level. This usually requires about 900 mg. of lithium carbonate per day. Serum levels are measured every 3-4 days until stable, then at monthly intervals unless the patient is at a high risk for toxicity. The therapeutic goal is a reduction in the intensity, duration, and frequency of manic or depressive episodes when compared to previous episodes. Patients with frequent or dramatic episodes are likely to respond most rapidly.

Patients on long-term lithium therapy should have semi-annual or annual evaluations of thyroid and renal function: thyroxine (T4) and triiodothyronine (T3) levels, palpation of the thyroid gland, and serum creatinine level. Any abnormality should be carefully

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weighed against the potential benefits of continued therapy. High risk patients with underlying disorders should have more frequent and more thorough monitoring and a continual evaluation of the merits of lithium therapy.

Summary

Lithium ion is now becoming accepted as the drug of choice for the treatment of acute mania and for prophylaxis against manic or depressive episodes in patients with bipolar affective (manic-depressive) illness. Physicians using this drug must be familiar with the differential diagnosis of the major affective illnesses, lithium's indications and contraindications, pretreatment evaluation, principles of therapy, and the adverse effects of lithium. Lithium is a very valuable drug and can be used with safety. However, its narrow therapeutic index requires care to avoid lithium toxicity.

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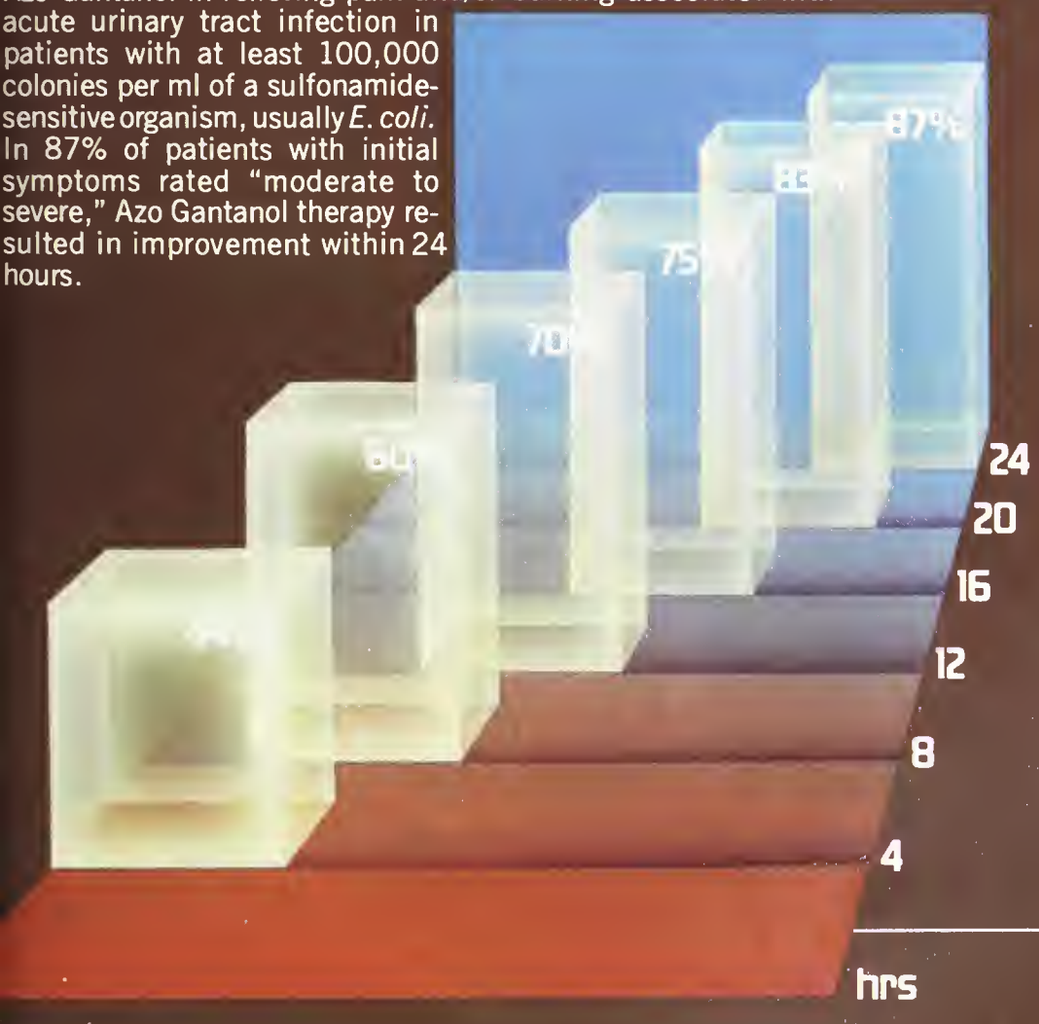

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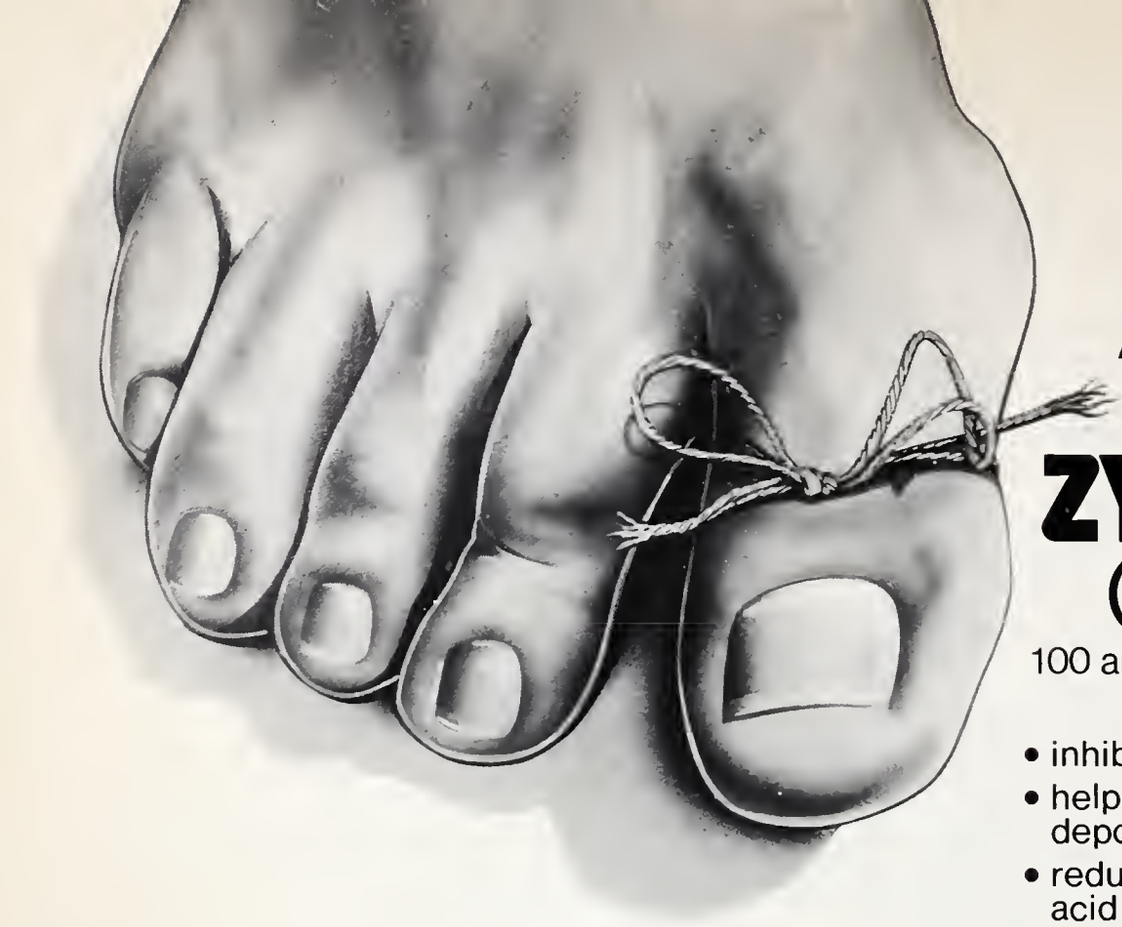


A reminder

ZYLOPRIM®
(allopurinol)

100 and 300 mg scored Tablets

- inhibits uric acid formation
- helps prevent urate crystal depositions in synovia
- reduces risk of uric acid lithiasis

INDICATIONS AND USE: This is not an innocuous drug and strict attention should be given to the indications for its use. Pending further investigation, its use in other hyperuricemic states is not indicated at this time.

Zyloprim® (allopurinol) is intended for:

1. treatment of gout, either primary, or secondary to the hyperuricemia associated with blood dyscrasias and their therapy;
2. treatment of primary or secondary uric acid nephropathy, with or without accompanying symptoms of gout,
3. treatment of patients with recurrent uric acid stone formation;
4. prophylactic treatment to prevent tissue urate deposition, renal calculi, or uric acid nephropathy in patients with leukemias, lymphomas and malignancies who are receiving cancer chemotherapy with its resultant elevating effect on serum uric acid levels.

CONTRAINDICATIONS: Use in children with the exception of those with hyperuricemia secondary to malignancy. The drug should not be employed in nursing mothers.

Patients who have developed a severe reaction to Zyloprim should not be restarted on the drug.

WARNINGS: ZYLOPRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. In some instances a skin rash may be followed by more severe hypersensitivity reactions such as exfoliative, urticarial and purpuric lesions as well as Stevens-Johnson syndrome (erythema multiforme) and very rarely a generalized vasculitis which may lead to irreversible hepatotoxicity and death.

A few cases of reversible clinical hepatotoxicity have been noted and in some patients asymptomatic rises in serum alkaline phosphatase or serum transaminase have been observed. Accordingly, periodic liver function tests should be performed during the early stages of therapy. particularly in patients with pre-existing liver disease

Patients should be alerted to the need for due precautions when engaging in activities where alertness is mandatory.

Nevertheless, iron salts should not be given simultaneously with Zyloprim. This drug should not be administered to immediate relatives of patients with idiopathic hemochromatosis.

In patients receiving Purinethol® (mercaptopurine) or Imuran® (azathioprine), the concomitant administration of 300-600 mg of Zyloprim per day will require a reduction in dose to approximately one-third to one-fourth of the usual dose of mercaptopurine or azathioprine. Subsequent adjustment of doses of Purinethol or Imuran should be made on the basis of therapeutic response and any toxic effects.

Usage in Pregnancy and Women of Childbearing Age. Zyloprim® (allopurinol) should be used in pregnant women or women of childbearing age only if the potential benefits to the patient are weighed against the possible risk to the fetus.

PRECAUTIONS: Some investigators have reported an increase in acute attacks of gout during the early stages of allopurinol administration, even when normal or subnormal serum uric acid levels have been attained.

It has been reported that allopurinol prolongs the half-life of the anticoagulant, dicumarol. This interaction should be kept in mind when allopurinol is given to patients already on anticoagulant therapy, and the coagulation time should be reassessed.

A fluid intake sufficient to yield a daily urinary output of at least 2 liters and the maintenance of a neutral or, preferably, slightly alkaline urine are desirable to (1) avoid the theoretic possibility of formation of xanthine calculi under the influence of Zyloprim therapy and (2) help prevent renal precipitation of urates in patients receiving concomitant uricosuric agents.

Patients with impaired renal function require less drug and should be carefully observed during the early stages of Zyloprim administration and the drug withdrawn if increased abnormalities in renal function appear.

In patients with severely impaired renal function, or decreased urate clearance, the half-life of oxipurinol in the plasma is greatly prolonged. Therefore, a dose of 100 mg per day or 300 mg twice a week, or perhaps less, may be sufficient to maintain adequate xanthine oxidase inhibition to reduce serum urate levels. Such patients should be treated with the lowest effective dose, in order to minimize side effects.

Mild reticulocytosis has appeared in some patients.

As with all new agents, periodic determination of liver and kidney function and complete blood counts should be performed especially during the first few months of therapy.

AOVERSE REACTIONS:

Dermatologic: Because in some instances skin rash has been followed by severe hypersensitivity reactions, it is recommended that therapy be discontinued at the first sign of rash or other adverse reaction (see WARNINGS). Skin rash, usually maculopapular, is the adverse reaction most commonly reported.
Exfoliative, urticarial and purpuric lesions, Stevens-Johnson syndrome (erythema multiforme) and toxic epidermal necrolysis have also been reported.
A few cases of alopecia with and without accompanying dermatitis have been reported.
In some patients with a rash, restarting Zyloprim (allopurinol) therapy at lower doses has been accomplished without untoward incident.

Gastrointestinal: Nausea, vomiting, diarrhea, and intermittent abdominal pain have been reported.

Vascular: There have been rare instances of a generalized hypersensitivity vasculitis or necrotizing angiitis which have led to irreversible hepatotoxicity and death.

Hematopoietic: Agranulocytosis, anemia, aplastic anemia, bone marrow depression, leukopenia, pancytopenia and thrombocytopenia have been reported in patients, most of whom received concomitant drugs with potential for causing these reactions. Zyloprim® (allopurinol) has been neither implicated nor excluded as a cause of these reactions.

Neurologic: There have been a few reports of peripheral neuritis occurring while patients were taking Zyloprim. Drowsiness has also been reported in a few patients.

Ophthalmic: There have been a few reports of cataracts found in patients receiving Zyloprim. It is not known if the cataracts predated the Zyloprim therapy. "Toxic" cataracts were reported in one patient who also received an anti-inflammatory agent; again, the time of onset is unknown. In a group of patients followed by Gutman and Yü for up to five years on Zyloprim therapy, no evidence of ophthalmologic effect attributable to Zyloprim was reported.

Drug Idiosyncrasy: Symptoms suggestive of drug idiosyncrasy have been reported in a few patients. This was characterized by fever, chills, leukopenia or leukocytosis, eosinophilia, arthralgias, skin rash, pruritus, nausea and vomiting.

OVERDOSAGE: Massive overdosing, or acute poisoning, by Zyloprim has not been reported.

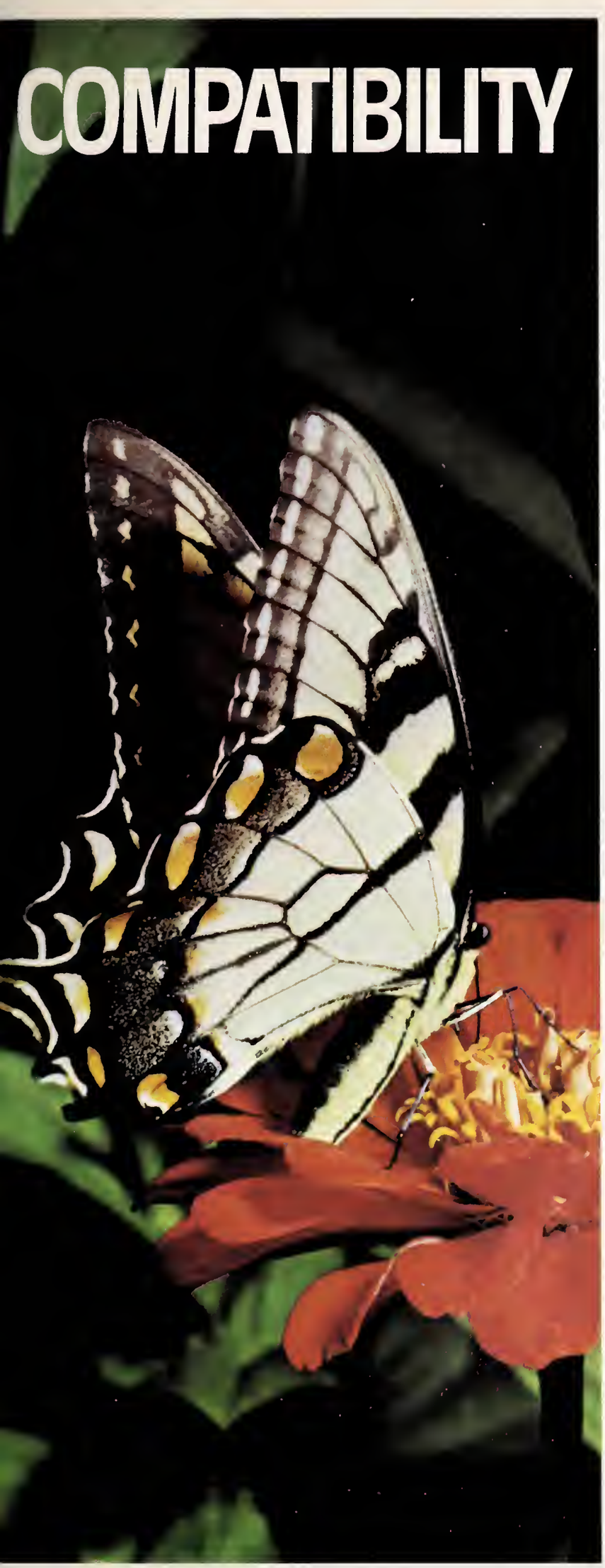
HOW SUPPLIED: 100 mg (white) scored tablets, bottles of 100 and 1000; 300 mg (peach) scored tablets, bottles of 30, 100 and 500. Unit dose packs for each strength also available.

Complete information available from your local B. W. Co. Representative or from Professional Services Department PML.

U.S. Patent No. 3,624,205 (Use Patent)

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709



Does it influence your choice of a peripheral/cerebral vasodilator*?

- Vasodilan—compatible with coexisting diseases
- Vasodilan—compatible with concomitant therapy
- Vasodilan—compatible with your total regimen for vascular insufficiency

***Indications:** Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.

Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral 10 to 20 mg., three or four times daily.

Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836

VASODILAN®

(ISOXSUPRINE HCl)

20-mg tablets

Mead Johnson PHARMACEUTICAL DIVISION

When painful spasm is the presenting symptom...

.in the functional bowel/irritable bowel syndrome*

Bentyl®

(dicyclomine hydrochloride USP)

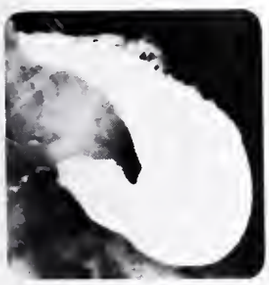
10 mg. capsules, 20 mg. tablets,
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity
with minimal anticholinergic side effects†

Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.

Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:
King, J.C. and Starkman, N M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

Merrell

8-4420 (Y736A) MNR-804

Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATIONS

Based on a review of this drug by the National Academy of Sciences–National Research Council and/or other information, FDA has classified the following indications as "probably" effective:

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis; toxic megacolon complicating ulcerative colitis, myasthenia gravis WARNINGS. In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating) Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug PRECAUTIONS Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy Use with caution in patients with: Autonomic neuropathy Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. ADVERSE REACTIONS: Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these Adverse reactions may include xerostomia; urinary hesitancy and retention, blurred vision and tachycardia, palpitations; mydriasis, cycloplegia; increased ocular tension, loss of taste, headache; nervousness; drowsiness; weakness; dizziness; insomnia, nausea; vomiting; impotence, suppression of lactation; constipation, bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation DOSAGE AND ADMINISTRATION: Dosage must be adjusted to individual patient's needs.

Usual Dosage Bentyl 10 mg capsule and syrup: *Adults:* 1 or 2 capsules or teaspoonfuls syrup three or four times daily *Children:* 1 capsule or teaspoonful syrup three or four times daily. *Infants:* ½ teaspoonful syrup three or four times daily (May be diluted with equal volume of water.) Bentyl 20 mg.: *Adults* 1 tablet three or four times daily Bentyl Injection: *Adults* 2 ml (20 mg.) every four to six hours intramuscularly only NOT FOR INTRAVENOUS USE. MANAGEMENT OF OVERDOSE. The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested If indicated, parenteral cholinergic agents such as Urecholine™ (bethanecol chloride USP) should be used

Product Information as of October, 1978.

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Decatur, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

Merrell

MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215, U.S.A.

AMA-ERF Student Loan Guarantee Program Continues Valuable Service

The American Medical Association Education and Research Foundation (AMA-ERF) Student Loan Guarantee Program helped over 5,500 medical students and house staff meet education expenses in 1976. During the year, $7.8 million was loaned to 5,055 medical students, 164 interns, and 328 residents. The average loan was $1,408. Both the number of loan recipients and the total amount loaned were substantially higher than in 1975. Since the program's inception in 1962, more than $77 million in loans have been arranged and guaranteed by the AMA-ERF. Physicians and their families (particularly their spouses in the AMA Auxiliary) are the major supporters of the program.

Student Loan Guarantee
Department
535 North Dearborn Street
Chicago, Illinois 60610

For additional information, write to Vincent Strazzabosco, Manager, at the above address or telephone: (312) 751-6250.

M. D. - - 1980

J. David Williams, M.D.

At the crossroads of the 1980s the American doctor looks back on a heritage of a horse and buggy house-call practice that monitored and sanctified (the M.D. treating and the clergy blessing) the act of dying . . . and today he looks forward to a "brave new world" of geometrically expanding complexity of costly technological advances that gives him enormous power over life and death - - cryo power, laser power, -meson power, and yet no power at all as the decisions regarding the use and application of these technologies exasperatingly slip into the hands of government control; a bureaucracy - impersonal, ignorant, irresponsible and frighteningly irrepressible.

It is too late now to hope that the crysalis of American medicine formed in the 1920s would hatch a butterfly in the 1980s, but we should all hope to rise higher than caterpillars. We should not denigrate the fact that we have become different from what we were, for, in fact, we are: how much acute disease is treated today versus fifty years ago as cataclysmic medical advances such as vaccination have reduced infant mortality rates to negligible levels. It is absurd to wish back "the good old days". In reality they are gone.

While a physician of the public health era and his successor, the physician of the pre-antibiotic era, spent ninety-nine percent of his effort in controlling outrageous disease, we should rejoice in the reconstructive and rehabilitative challenges of the 1980s where the doctor has become the ultimate benefactor of men dispensing health instead of stamping out disease.

It is unfortunate that the ephithet "Health Care Provider" should have government origins and thus taint its underlying meaning for it is quite accurate in its description. While a small segment of modern medicine continues a front line assult on life threatening medical and surgical disease, the vast number of physicians, because of sweeping technological changes, are involved in prevention of disease or the reconstruction-rehabilitation and restoration following disease: for example, pediatrics is overwhelmingly a specialty of perserving healthy babies. Otolaryngology has turned from destructive (but life saving mastoidectomies) to hearing restoration through tympanoplasties - all due to technological advances. The treatment of cancer is now a race between sophisticated immunological, chemical, and radiological Trojan horse technology of killing disease (as opposed to normal tissue) with surgical therapy following more distantly in fourth place.

The exposition of this theme is tedious but examples are all about us and grow more obvious every day.

Just as the landed gentry over a century ago had to pay adieu to the halcyon days of the agarian economy and embrace, with some resignation and bitterness, the upheavals of the industrial revolution, so the physicians of today must admit and embrace the technological revolution - no, this must be done positively with confidence and leadership for you, as physicians, are still the best judge of the application of modern technology. "Cost effective" is not a government invention but a reality of the revolution and you must deal with it. CAT scanning is expensive and this does not make it bad or good; only its application or misapplication are the subject of morality. Who is a better judge than you to make these decisions?

While you may have felt safe in the non-committal posture of the 1960s and 1970s, the present crisis of government control of your *heritage* is real and to do nothing now is amoral, for you know the consequences:

J. David Williams is a otolaryngology and maxillofacial surgeon, 3730 Rhone Circle, Anchorage, Alaska 99504.

history will have the physician bare the mark of Cain, not the government; for the government is the people and whenever have the people blamed themselves?

The basic problems that exist today in the self-image of the American doctor is not the pseudo-struggle between the free-enterprise system of medicine and its government takeover, it is rather the problem of understanding the complex changes that have altered the physician's role; indeed, an algebraic sum of social and economic vectors have produced a new public pedestal upon which the physician must climb in order to lead his patients with intelligence and compassion through the Orwellian dawn of twentieth century medical technology.

To turn away from this reality is not only to crush ones own "enlightened self-interest" but certainly to cast the future of his patients into a bureauratic quagmire from which there will be no returning and no livable solution.

Exercise Important To Weight Control

Exercise To Reduce

Health Surveys indicate that many people are gaining weight or staying overweight on relatively moderate calorie intakes. Although overeating is probably the major cause of overweight, physical inactivity contributes greatly to the problem.

There are a few encouraging signs that desire for fitness, or health-consciousness, is replacing simple weight-consciousness in the minds of many Americans.

There is growing awareness that a sedentary way of life can contribute to degenerative disease of the arteries and to obesity and its potential complications, most notably, diabetes, says a new pamphlet from the American Medical Association.

There also is a growing preference among Americans for a healthy, physically fit appearance. Emphasis is on condition. Body, skin and hair that are in good condition are widely regarded as necessary for good looks.

You may feel too lazy to get started on a physical fitness program, but it's probably the lack of exercise that makes you feel that way. On the other hand, you may think of yourself as active or energetic because you are always busy—too busy to take time out for vigorous exercise. Some of the busiest people in the world have found time for jogging, tennis or morning calisthenics.

There are all sorts of guides to simple home exercise programs. Or there is jogging or other such activities. Or regular participation in active sports and games, such as handball or tennis. If you are over age 30 or are unaccustomed to vigorous exercise, consult with your physician before starting a program.

But, if you want to maintain good health and to keep the excess pounds off, a regular, vigorous exercise program is a must. For the rest of your life.

April, 1979

Frank Chappell
Science News Editor
AMA

DELEGATE'S REPORT AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES INTERIM MEETING, DECEMBER 1978

Joseph M. Ribar, M.D.

I thank you for allowing me to represent you again in the House of Delegates at the interim meeting in Chicago on December 2nd through December 6th. Chicago, as usual, is a beautiful city to visit in the middle of the winter. After circling Chicago for about an hour and 40 minutes in a snow storm and being held up because there was only one runway open, we finally landed safely. After a few more fair days on Sunday, Monday, and Tuesday, we again experienced a storm as I was leaving and I had to wait an hour and a half to take off! However, as many of you know, the delegate's time is spent in the confines of the Headquarters Hotel for most of the time, so I did not really have to suffer the ravages of the beginning of a very severe winter for the Midwest.

At this meeting, there were about 200 items of business considered, and they presented many difficult and far-reaching decisions for your delegates. Those actions will have a decided impact on the future course of the Association and on each individual physician.

Before I get into the specific actions taken by the House, it has occurred to me that maybe all members of the State Medical Association do not know how the affairs of the House of Delegates are conducted.

At the beginning of the meeting on Sunday, the various resolutions and reports from the Board of Trustees, the Councils and the Standing Committees are referred to one of eight committees according to the nature of their relationship to the various aspects of health dealt with by the American Medical Association. All resolutions, committee reports and Council reports referrable to national health insurance or any type of legislation are referred to one committee, for instance, and all things considering aspects of hospital regulation, practices and services are referred to another committee, and so on. The various committees are all appointed by the Speaker and Vice Speaker of the House and consist of five men, the chairman of whom is appointed by the Speaker of the House. The various items are taken up by the committees in open hearing all day on Monday, and any member of the American Medical Association may appear before the committee and express his views on any particular subject being discussed by the committee at that time. The committee takes all testimony under consideration, and then, with the help of the A.M.A. staff and some long diligent work often far into the night, come up with committee reports that are presented on the floor of the House beginning on Tuesday morning for consideration of the delegates. At this time, of course, the delegates may rise and debate the report of the committee. Final action on any item then is taken by the House of Delegates and is made a part of the permanent record.

There were three major issues which dominated the House discussion;

1. The chiropractic and the settlement of the Pennsylvania suit brought by a chiropractor against the American Medical Association and the Pennsylvania Medical Society and other organizations;
2. The question of national health insurance and whether the A.M.A. should cause a proposal to be introduced into Congress and, if so, what would be contained in the bill;
3. Proposed revision of the Principles of Medical Ethics.

Enough has been said and written about the controversy over the A.M.A.'s policy on chiropractic and the proposed settlement of the

Alaska State Medical Association Delegate to the American Medical Association.

Pennsylvania chiropractic suit, so I won't go into much detail on the background. Simply stated, the A.M.A. and several other organizations were sued by a Pennsylvania chiropractor and the Pennsylvania Chiropractic Society charging that there was a conspiracy to prevent chiropractors from practicing their profession as provided for by the law. After much time and legal expense, all parties had agreed to settle the suit except the Pennsylvania Radiological Society and the American College of Radiology. In an effort to delay the settlement, two delegates, at the request of four specialty organizations, filed suit against the A.M.A. challenging the authority of the Board of Trustees to enter into a settlement agreement without concurrence by the House of Delegates.

In a rare closed meeting, we considered several resolutions on the issue. The House "acknowledged and affirmed" the authority of the Board of Trustees to settle the lawsuit. The House also called on the A.M.A. to "continue to warn the public of the hazards to health of entrusting the diagnosis and treatment of diseases such as cancer, diabetes, malignant hypertension, cardiovascular stroke, and infections to practitioners who, in the treatment of these conditions, rely upon the theory that all disease is caused by misalignment of spinal vertebrae and can be cured by manual manipulation of the spine."

We also supported the physician's right to choose whom he or she will accept as patients and the right to exercise this choice by the terms of contractual arrangements with other physicians, medical groups, hospitals or other institutions.

We also stated that a physician's obligations to provide information to a patient of any other party are those required by customary good medical practice and law.

It was also requested that the Judicial Council reconsider Article 3.70 of Section III of Judicial Council *Opinions and Reports*. This article states that physicians may accept or decline patients sent to them by licensed limited practitioners or by laymen. It also states that the role of specialists in providing information to such patients if they choose to provide services.

It was also stated that none of these actions should be construed as an amendment to the A.M.A.'s Principles of Medical Ethics.

Incidental to all this compromise on the floor and reaffirmation of the right of the Board of Trustees to deal with the individual suits, Dr. Alton Ochsner and Dr. Long from the American College of Radiology and the American Roentgen Society publically withdrew their suits filed against the American Medical Association.

We did leave the Chicago meeting hoping that the misunderstanding surrounding the controversy had been resolved and that the damaging divisiveness generated by this highly emotional issue was behind us.

As usual, the A.M.A.'s position on national health insurance was once again a major topic for debate. Looking ahead to the new Congress and the expiration of all current national health insurance proposals, the delegates considered several resolutions and reports to establish a current A.M.A. policy. Establishing this policy again took up a good deal of one day's time in the discussion and debate between various states and delegates on the floor. This issue has been before the House for at least the last 15 or 16 meetings and, in the past, after a long discussion, the vote has always been approximately two to one in favor of the A.M.A. presenting a national health insurance bill to the Congress. This time, there was a complete reversal of form, and after all the dust cleared, the Board of Trustees was instructed by the House delegates *not* to submit a new national health insurance bill to the new Congress, and this was passed by appro-imately two to one; a complete reversal of the previous actions. The A.M.A. House of Delegates told the Board of Trustees to recommend to Congress modifications of the present health care system and that the A.M.A. sponsor legislation, if necessary, embodying these principles:

1. Requiring minimum standards of adequate benefits in all health insurance policies sold in the United States with appropriate deductible and coinsurance;
2. A civil system of uniform benefits provided by the federal, state, and local governments for those individuals who are unfortunate enough (through no fault of their own, i.e. age, disability, financial hardship, etc.) not to be able to provide for their own medical care;
3. A nationwide program by the private insurance industry of America (and government, if necessary for reinsurance) to make available catastrophic insurance coverage for those illnesses and individuals where the economic impact of catastrophic illness could be tragic. All catastrophic coverage should have an appropriate deductible and coinsurance to make it economically feasible and to avoid abuse;
4. A program developed pursuant to these principles should be administered at

the state level with national standardization through federal guidelines.

The Board of Trustees was authorized to submit a bill following the above guidelines only if it was felt to be absolutely necessary and urgent.

As a reaction to a great deal of pressure and suits and pending suits by the F.T.C. against the A.M.A. because of its so-called "restriction of trade" and "restriction of advertising" and other unethical practices, the legal department of the American Medical Association had asked the Judicial Council to revise the principles of medical ethics. The initial revision was presented to the House of Delegates at the annual meeting in June and was summarily rejected and returned to the Judicial Committee for further alterations.

At the interim meeting, the Ad Hoc Committee, which was appointed, reported that it was not yet ready to make a final report and asked for authorization to continue its work for a report at the 1979 annual meeting in Chicago. The House did grant the committee additional time.

This is another instance of federal bureaucratic meddling and attempts to regulate ethics in a profession that has had a fine code of ethics and followed the same ethical principles for hundreds of years. It is very difficult for me to understand how we can establish any principles of medical ethics by government fiat. The last time I ever heard of anything like this, the Lord spoke to Moses and gave him the Ten Commandments.

The House also acted on a major report from the Council on Medical Services pertaining to second surgical opinion programs. While recognizing that the advisability of surgery or other specific therapy is a matter of opinion, the House opposed a concept of mandatory second opinions or the imposition of financial penalties by third party payer for not obtaining such a second opinion. In a related action, the House did reaffirm the right of the patient or the physician to seek a second opinion freely from any physician of his/her choice and supported the concept that, when payment is required by a third party payer for that second opinion, that second opinion should be at no cost to the patient.

In relation to financial matters, the House approved a 1969 budget based on expected revenues of over $62 million and expected expenses of $55 million. I am happy to relate that the Association is once again operating on a very financially sound basis. I think is behooves all Doctors of Medicine to belong to the American Medical Association so that we could have one voice speaking for American medicine. However, during 1978, only 1,300 physicians became full, dues-paying members, but one bright spot in the membership picture is the continuing increase in the number of medical students and residents who are joining the American Medical Association.

It is impossible to review all of the actions considered by the House; however, most of these have been appearing in the American Medical News since the December 15th issue, and if there are any specific questions that I can answer for any of my colleagues, I would appreciate a note or a call and will try to do my best to help out with any specific problems or refer you to specific departments of the American Medical Association which are always happy to answer your questions.

Respectfully submitted,
Joseph M. Ribar, M.D.
Delegate

The Maker

Examining a Few Myths About Prescribing.

Increasing pressure is being put on the practicing physician to prescribe drugs generically. You are told that brand-name products are universally "expensive" and generic versions are relatively "cheap." To make this case, the most extreme (rather than typical) price differentials are cited. Thus, consumers are led to believe that such differentials are commonplace. Even your knowledge and your motives as a physician are questioned.

Understandably, these views have created myths. We think it's time to examine them in the light of all the facts and ramifications.

MYTH: There are no differences in quality and performance between brand-name products and their generic counterparts. The corollary is that there are no differences among products made by high-technology, quality-conscious, research-based companies and those made by commodity-type suppliers.

FACT: The Food and Drug Administration does a good job in monitoring a generally excellent drug supply. Still, it has nowhere near the resources to guarantee the quality and bioavailability of all marketed products at any given time. Just a few months ago, for example, it noted that batches of tetracycline HCl capsules which met official monograph requirements were not bioequivalent to a reference product. As you know, there is substantial literature on this subject affecting many drugs, including such antibiotics as tetracycline and erythromycin. The record on drug recalls and court actions affirms strongly that there are differences among pharmaceutical companies and their products. Research-intensive companies have far better records than those that do no research and may practice minimum quality assurance.

MYTH: Industry favors only "expensive" brand names and denigrates all generics.

FACT: PMA companies make 90 to 95 percent of the drug supply, including, therefore, most of the generics. Drug nomenclature is not the important point; it's the competence of the manufacturer and the integrity of the product that count.

Matters.

MYTH: Generic options almost always exist.

FACT: About 55 percent of prescription drug expenditure is for single-source drugs. This means, of course, that for only 45 percent of such expenditure, is a generic prescribing option available.

MYTH: Generic prescriptions are filled with inexpensive generics, thus saving consumers large sums of money.

FACT: Market data show that you invariably prescribe—and pharmacists dispense—both brand and generically labeled products from known and trusted sources, in the best interest of patients. In most cases the patient receives a proven brand product. Savings from voluntary or mandated generic prescribing are grossly exaggerated.

MYTH: Drugs account for a major portion of the rise in health care costs.

FACT: Drugs represent a very small part of such costs. The amount of the health care dollar spent for prescription drugs was about 12 cents in 1967; today it is about 8 cents. And you as a physician are most conscious of how drug therapy can cut hospitalization, avert surgery, reduce office visits and keep patients on the job.

MYTH: Government intrusions into the marketplace will save tax money.

FACT: Government schemes always cost the taxpayer something, and the costs often exceed the benefits. Certainly, any federal "help," such as lists of wholesale drug prices sent to all physicians and pharmacists, will be no exception. Just think of the expense of keeping them current! Moreover, wholesale prices are poor guides to actual transaction prices and even worse guides to retail prices.

The PMA Position

We believe your freedom to prescribe, either by generic or brand name, should be totally unabridged. Otherwise, your prescribing prerogatives and your relationships with patients will be seriously impaired.

The maker does matter

After the myths about price and equivalency have been shattered, one fact stands out more clearly than ever: *The maker does matter.* As always, your best guide to drug therapy for your patients is to select products—both brands and generics—from manufacturers with credentials and performance records you have come to respect.

PMA

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

CIRCUMPOLAR HEALTH SYMPOSIUM

C. Earl Albrecht, M.D.

At Academic City (ACADEM-GORODOK) 20 miles from Novosibirsk, Siberia, the IV International Symposium on Circumpolar Health was held October 1-7, 1978. In attendance were over one hundred non-Russians from eleven countries. About four hundred scientists came from the Novosibirsk area, but nearly 1,500 from all areas of the Soviet Union attended parts of the sessions. Members of the International Advisory and Organizing Committee accepted the invitation from Denmark to hold the V Symposium in Copenhagen, August 9-13, 1981.

Dr. Fred Milan, Professor at the Institute of Arctic Biology, University of Alaska, was the U.S. Member on the Organizing Committee. Because I was the founder of these meetings, I was there ex-officio. Only eleven attended from the United States which proportionately was a very poor showing. No one represented Alaska Division of Health. It was regretable that the U.S. had speakers who did not attend, making our "no shows" (16 in number of listed papers) the highest of all nations. Why this occurred, I do not know, but it points up the need for establishing an American agency that will assume some responsibility for coordination and planning. Since the meetings occur about every three years and become increasingly more valuable, it should be the responsibility of the United States to organize and host the VI Symposium in 1984.

When the concept of bringing together scientists responsible for improving the health of people living and working in the Arctic and Subarctic developed, I was Commissioner of Health in Alaska. At that time I recognized that Canada and Greenland had many similar health problems. So we exchanged ideas and program plans as much as possible to assist each other in coping with our major problems. The value of these relationships lead to the plan of bringing together scientists from all the Circumpolar nations to improve health conditions through research and delivery of health care in their respective nations. While I was a governor of the Arctic Institute of North America, I suggested that the Institute sponsor an International Circumpolar Health Meeting. With a grant from the National Institute of Health, the first conference was held at the University of Alaska, Fairbanks in 1967. I had the honor of serving as chairman.

This meeting proved to be so valuable that the Advisory Committee recommended a second be held in Oula, Finland in 1971. I participated as the U.S. representative in the program planning of that meeting. The third was hosted by Canada at Yellowknife in 1974 where an outstanding program was presented. At that time the Soviet representatives extended a preliminary invitation which developed into their organizing the IV Symposium. It was sponsored by the Siberian Branch of the USSR Academy of Medical Sciences and the Regional Office for Europe of the WHO. Academician V. P. Kaznacheev was the president of the symposium and chairman of the Organizing Committee. The success of the meetings can be attributed largely to his guidance and leadership.

The location of the meeting at Academic City was most fitting. Here the USSR has built a small community of 3,000 scientists working in over a dozen institutes. *The National Geographic* calls it one of the largest "Think Tanks" in the world. Institutes, with offices, lecture halls and laboratories, cover such fields as organic chemistry, physics, physiology, nuclear physics, genetics, mathematics, geology, archaeology and medicine. Here is located a school for 500 gifted children ages 14-17 selected from all over the Soviet Union who receive intensive training in mathematics,

Dr. C. Earl Albrecht, Box 1385, Palmer, Alaska 99645.

physics, biochemistry and other sciences. The symposium sessions were held in the Hall of Science a most satisfactory facility for a large meeting fully equipped with visual aids, amplification and simultaneous translation into English and Russian for all papers, discussion and announcements. Here were dining rooms and snack bars.

The participants stayed in hotels at Novosibirsk a City of 1,300,000. It has been referred to as the Pittsburg of Siberia. At the center of the city is a large opera house, a building for the circus and a music conservatory where concerts are held several times a week. Many high-rise apartment complexes are seen as well as large suburbs of private homes most of which have a small garden plot. The people throughout the city were cordial and friendly.

Since I cannot speak any Russian, I usually turned to young people and most of the time found someone who could communicate in English or German. At the meeting many young women who were superb translators were available whenever needed. After the sessions, when no activities were scheduled, I would take pictures. The youth or police would be most helpful in giving directions or information. Some conducted tours of Novosibirsk and Academic City, giving a detailed description of buildings, activities and statistics. The geominerological museum revealed the vast natural resources of Siberia, high lighted by maps locating deposits of oil, gas, coal, diamonds, silver, gold etc.

The scientific program was well-organized and presented in three sections with simultaneous translation in English and Russian. There was some discussion but unfortunately with nearly 300 papers not enough time had been allowed.

If there were a theme for the session, it was man's adaptation to the North. In a paper, academician V. P. Kaznacheev said "Adaptation to the North is the problem of the century for our countries".

Enroute to Novosibirsk, I spent some time in Moscow. I was completely on my own but the English speaking agents at Intourist offices were always helpful. They arranged an opera and a ballet at the famous Bolshoi Theater. One evening I attended a concert in a cathedral of Russian religious and folk music. Moscow has many impressive cathedrals with colorful spires, the most spectacular being St. Basil. Visits to the Kremlin, art galleries and an extensive tour of the city convinced me that Moscow is an interesting city to visit. There is evidence of much preparation for the 1980 olympics which promises to be a spectacular event.

In summary, I must say that going to Moscow as a tourist and attending the IV International Symposium on Circumpolar Health in Siberia was a rewarding experience. The discussion of Northern medicine with old and new found scientists concerned with Circumpolar Health was stimulating. A major consideration dealt with man's adaptation to Northern latitudes. This will become more and more important in the decades ahead since rich deposits of natural resources are being found there.

I feel great personal satisfaction as one who believes that circumpolar nations can find mutual intellectual bonds. A forum has been established where scientists can present ideas, research results and theories. While this meeting served the Soviets particularly, an opportunity was presented for the rest of us to learn much about them.

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This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in postsympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

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U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
CENTER FOR DISEASE CONTROL
ATLANTA, GEORGIA 30333

GONORRHEA

CDC Recommended Treatment Schedules, 1978

Note: Physicians are cautioned to use no less than the recommended dosage of antibiotics.

UNCOMPLICATED GONOCOCCAL INFECTIONS IN MEN AND WOMEN

Drug Regiments of Choice

Aqueous procaine penicillin G (APPG) 4.8 million units injected intramuscularly at two sites, with 1.0 g of probenecid by mouth.

or

Tetracycline hydrochloride* 0.5 g by mouth 4 times a day for 5 days (total dosage 10.0 g). Other tetracyclines are not more effective than tetracycline hydrochloride. All tetracyclines are ineffective as a single-dose therapy.

or

Ampicillian 3.5 g, or amoxicillin 3.0 g, either with 1 g probenecid by mouth. Evidence shows that these regimens are slightly less effective than the other recommended regimens.

Patients who are allergic to the penicillins or probenecid should be treated with oral tetracycline as above. Patients who cannot tolerate tetracycline may be treated with spectinomycin hydrochloride 2.0 g in one intramuscular injection.

Special Considerations

- Single-dose treatment is preferred in patients who are unlikely to complete the multiple-dose tetracycline regimen.
- The APPG regimen is preferred in men with anorectal infection.
- Pharyngeal infection is difficult to treat; high failure rates have been reported with ampicillin and spectinomycin.
- Tetracycline treatment results in fewer cases of post-gonococcal urethritis in men.
- Tetracycline may eliminate coexisting chlamydial infections in men and women.
- Patients with incubating syphilis (seronegative, without clinical signs of syphilis) are likely to be cured by all the above regimens except spectinomycin. All patients should have a serologic test for syphilis at the time of diagnosis.
- Patients with gonorrhea who also have syphilis or are established contacts to syphilis should be given additional treatment appropriate to the stage of syphilis.

*Food and some dairy products interfere with absorption. Oral forms of tetracycline should be given 1 hour before or 2 hours after meals.

Treatment of Sexual Partners

Men and women exposed to gonorrhea should be examined, cultured and treated at once with one of the regimens above.

Followup

Followup cultures should be obtained from the infected site(s) 3-7 days after completion of treatment. Cultures should be obtained from the anal canal of all women who have been treated for gonorrhea.

Treatment Failures

The patient who fails therapy with penicillin, ampicillin, amoxicillin, or tetracycline should be treated with 2.0 g of spectinomycin intramuscularly.

Most recurrent infections after treatment with the recommended schedules are due to *reinfection* and indicate a need for improved contact tracing and patient education. Since infection by penicillinase (B-lactamase)-producing Neisseria gonorrhoeae is a cause of treatment failure, post-treatment isolates should be tested for penicillinase production.

Not Recommended

Although long-acting forms of penicillin (such as benzathine penicillin G) are effective in syphilotherapy, they have NO place in the treatment of gonorrhea. Oral penicillin preparations such as penicillin V are not recommended for the treatment of gonococcal infection.

PENICILLINASE-PRODUCING *NEISSERIA GONORRHOEAE* (PPNG)

Patients with uncomplicated PPNG infections and their sexual contacts should receive spectinomycin 2.0 g intramuscularly in a single injection. Because gonococci are very rarely resistant to spectinomycin and reinfection is the most common cause of treatment failure, patients with positive cultures after spectinomycin therapy should be re-treated with the same dose.

A PPNG isolate that is resistant to spectinomycin may be treated with cefoxitin 2.0 g in a single intramuscular injection, with probenecid 1.0 g by mouth.

TREATMENT IN PREGNANCY

All pregnant women should have endocervical cultures for gonococci as an integral part of the prenatal care at the time of the first visit. A second culture late in the third trimester should be obtained from women at high risk for gonococcal infection.

Drug regimens of choice are APPG, ampicillin or amoxicillin, each with probenecid as described above.

Women who are allergic to penicillin or probenecid should be treated with spectinomycin.

Refer to the sections on acute salpingitis and disseminated gonococcal infections for the treatment of these conditions during pregnancy. Tetracycline should not be used in pregnant women because of potential toxic effects for mother and fetus.

ACUTE SALPINGITIS (PELVIC INFLAMMATORY DISEASE)

There are no reliable clinical criteria on which to distinguish gonococcal from non-gonococcal salpingitis. Endocervical cultures for *N. gonorrhoeae* are essential. Therapy should be initiated immediately.

A. Hospitalization should be strongly considered in these situations:

1. Uncertain diagnosis, in which surgical emergencies such as appendicitis and ectopic pregnancy must be excluded.
2. Suspicion of pelvic abscess.
3. Severely ill patients.
4. Pregnancy.
5. Inability of the patient to follow or tolerate an outpatient regimen.
6. Failure to respond to outpatient therapy.

B. Antimicrobial Agents

Outpatients

Tetracycline* 0.5 g taken orally 4 times a day for 10 days. This regimen should not be used for pregnant patients.

or

APPG 4.8 million units intramusclularly, ampicillin 3.5 g or amoxicillin 3.0 g each with probenecid 1.0 g. Either regimen is followed by ampicillin 0.5 g or amoxicillin 0.5 g orally 4 times a day for 10 days.

Hospitalized patients

Aqueous crystalline penicillin G 20 million units given intravenously each day until improvement occurs, followed by ampicillin 0.5 g orally 4 times a day to complete 10 days of therapy.

or

Tetracycline* 0.25 g given intravenously 4 times a day until improvement occurs, followed by 0.5 g orally 4 times a day to complete 10 days of therapy. This regimen should not be used for pregnant women. The dosage may have to be adjusted if renal function is depressed.

Since optimal therapy for hospitalized patients has not been established, other antibiotics in addition to penicillin are frequently used.

C. Special Considerations

-- Failure of the patient to improve on the recommended regimens does not indicate the need for stepwise additional antibiotics but requires clinical reassessment.

-- The intrauterine device is a risk factor for the development of pelvic inflammatory disease. The effect of removing an intrauterine device on the response of acute salpingitis to antimicrobial therapy and on the risk of recurrent salpingitis is unknown.

-- Adequate treatment of women with acute salpingitis must include examination and appropriate treatment of their sex partners because of their high prevalence of nonsymptomatic urethral infection. Failure to treat sex partners is a major cause of recurrent gonococcal salpingitis.

-- Followup of patients with acute salpingitis is essential during and after treatment. All patients should be recultured for *N. gonorrhoeae* after treatment.

ACUTE EPDIDYMITES

Acute epididymitis can be caused by *N. gonorrhoeae, Chlamydia* or other organisms. If gonococci are demonstrated by Gram stain or culture of urethral secretions, treatment should be:

APPG 4.8 million units, ampicillin 3.5 g or amoxicillin 3.0 g, each with probenecid 1.0 g. Either regimen is followed by ampicillin 0.5 g or amoxicillin 0.5 g orally 4 times a day for 10 days.

or

Tetracycline* 0.5 g orally 4 times a day for 10 days.

If gonococcii are not demonstrated, the above tetracycline regimen should be used.

DISSEMINATED GONOCOCCAL INFECTION

A. Equally effective treatment schedules in the arthritis-dermatitis syndrome include:

Ampicillin 3.5 g or amoxicillin 3.0 g orally, each with probenecid 1.0 g, followed by ampicillin 0.5 g or amoxicillin 0.5 g 4 times a day orally for 7 days.

or

Tetracycline* 0.5 g orally 4 times a day for 7 days. Tetracycline should not be used for complicated gonococcal infection in pregnant women.

or

Spectinomycin 2.0 g intramuscularly twice a day for 3 days (treatment of choice for disseminated infections caused by PPNG).

or

Erythromycin 0.5 g orally 4 times a day for 7 days.

or

Aqueous crystalline penicilline G 10 million units intravenously per day until improvement occurs, followed by ampicillin 0.5 g 4 times a day to complete 7 days of antibiotic treatment.

B. Special Considerations

-- Hospitalization is indicated in patients who may be unreliable, have uncertain diagnosis, or have purulent joint effusions of other complications.

-- Open drainage of joints other than the hip is not indicated.

-- Intra-articular injection of antibiotics is unnecessary.

C. Meningitis and endocarditis caused by the gonococcus require high-dose intravenous penicillin therapy. In penicillin-allergic patients with endocarditis, de-

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sensitization and administration of penicillin is indicated; chloramphenicol may be used in penicillin-allergic patients with meningitis.

GONOCOCCAL INFECTIONS IN PEDIATRIC PATIENTS

With gonococcal infections in children beyond the newborn period the possibility of sexual abuse must be considered. Genital, anal and pharyngeal cultures should be obtained from all patients before antibiotic treatment. Appropriate cultures should be obtained from individuals who have had contact with the child.

PREVENTION OF GONOCOCCAL OPHTHALMIA

When required by State legislation or indicated by local epidemiologic considerations, effective and acceptable regimens for prophylaxis of neonatal gonococcal ophthalmai include:

Ophthalmic ointment or drops containing tetracycline or erythromycin.

or

One percent silver nitrate solution.

Special Considerations

- -- Bacitracin is not recommended.
- -- The value of irrigation after application of silver nitrate is unknown.

MANAGEMENT OF INFANTS BORN TO MOTHERS WITH GONOCOCCAL INFECTION

The infant born to a mother with gonorrhea is at high risk of infection and requires treatment with a single intravenous or intramuscular injection of aqueous crystalline penicillin G 50,000 units to full-term infants or 20,000 units to low-birth-weight infants. Topical prophylaxis for neonatal ophthalmia is not adequate treatment. Clinical illness requires additional treatment.

NEONATAL DIAEASE

A. Gonococcal Ophthalmia: Patients should be hospitalized and isolated for 24 hours after initiation of treatment. Untreated gonococcal ophthalmia is highly contagious. Aqueous crystalline penicillin G 50,000 units/kg/day in 2 doses intravenously should be administered for 7 days. Saline irrigation of the eyes should be performed as needed. Topical antibiotic preparations alone are not sufficient or required when appropriate systemic antibiotic therapy is given.

B. Complicated Infection: Patients with arthritis and septicemia should be hospitalized and treated with aqueous crystalline penicillin G 75,000 to 100,000 units/kg/day intravenously in 2 or 3 divided doses for 7 days. Meningitis should be treated with aqueous crystalline penicillin G 100,000 units/kg/day, divided into 3 or 4 intravenous doses, and continued for at least 10 days.

CHILDHOOD DISEASE

Children who weigh 100 lbs. (45 kg) or more should receive adult regimens. Children who weigh less than 100 lbs. should be treated as follows:

Uncomplicated Disease

Uncomplicated vulvovaginitis, urethritis, proctitis or pharyngitis can be treated at one visit with:

Amoxicillin 50 mg/kg orally with probenecid 25 mg/kg (maximum 1.0 g).

or

Aqueous procaine penicillin G 100,000 units/kg intramuscularly plus probenecid 25 mg/kg (maximum 1.0 g).

Special Considerations

- -- Topical and/or systemic estrogen therapy are of no benefit in vulvovaginitis.
- -- Long-acting penicillins, such as benzathine penicillin G, are not effective.
- -- All patients should have followup cultures and the source of infection should be identified, examined and treated.

Gonococcal Ophthalmia

Ophthalmia in children is treated as in neonates but the dose of penicillin is increased to 100,000 units/kg/day intravenously.

Complicated Infections

Patients with peritonitis or arthritis require hospitalization and treatment with aqueous crystalline penicillin G, 100,000 units/kg/day intravenously for 7 days. Aqueous crystalline penicillin G 250,000 units/kg/day intravenously in 6 divided doses for at least 10 days is recommended for meningitis.

Allergy to Penicillins

Children who are allergic to penicillins should be treated with spectinomycin 40 mg/kg intramuscularly. Children older than 8 years may be treated with tetracycline 40 mg/kg/day orally in 4 divided doses for 5 days. For treatment of complicated disease, the alternative regimens recommended for adults may be used in appropriate pediatric dosages.

ROCHE

For recurrent attacks of urinary tract infection in women

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Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register, 37*:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

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Please see back cover.

Her next attack of cystitis may require

the Bactrim™ 3-system counterattack

ROCHE

Bactrim has shown high clinical effectiveness in recurrent cystitis as a result of its wide spectrum and distinctive antimicrobial action in the urinary, vaginal and lower intestinal tracts.

The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Enterobacteriaceae* in the bowel without the emergence of resistant organisms. Thus, Bactrim reduces the risk of introital colonization by fecal uropathogens. It has *no* significant effect on other normal, necessary intestinal flora.

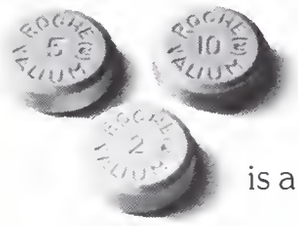
Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Please see reverse side for summary of product information.

ALASKA MEDICINE

Volume 21, Number 4 July 1979

A character all its own.



Valium (diazepam/Roche) is a benzodiazepine with a character all its own. Pharmacologically, it is a potent skeletal muscle relaxant and anticonvulsant (in adjunctive use), as well as an antianxiety agent. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

But the individual character of Valium is even more apparent clinically than pharmacokinetically. And far more significant. That's because of the patient response obtained with Valium. A response which brings a calmer frame of mind. A response which has a pronounced effect on the somatic symptoms of anxiety, particularly muscular tension. A response which helps the patient feel more like himself again because of the way Valium reduces the overwhelming symptoms of anxiety and psychic tension.

Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

Valium® (IV)
diazepam/Roche

2-mg, 5-mg, 10-mg scored tablets

a prudent choice in psychic tension and anxiety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

Usage in Pregnancy: **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10.

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ALASKA MEDICINE

Official Journal of the Alaska State Medical Association

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ORIGINAL ARTICLES

FEATURES

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About the Cover: *McNeil River* by Steven Menaker, M.D.

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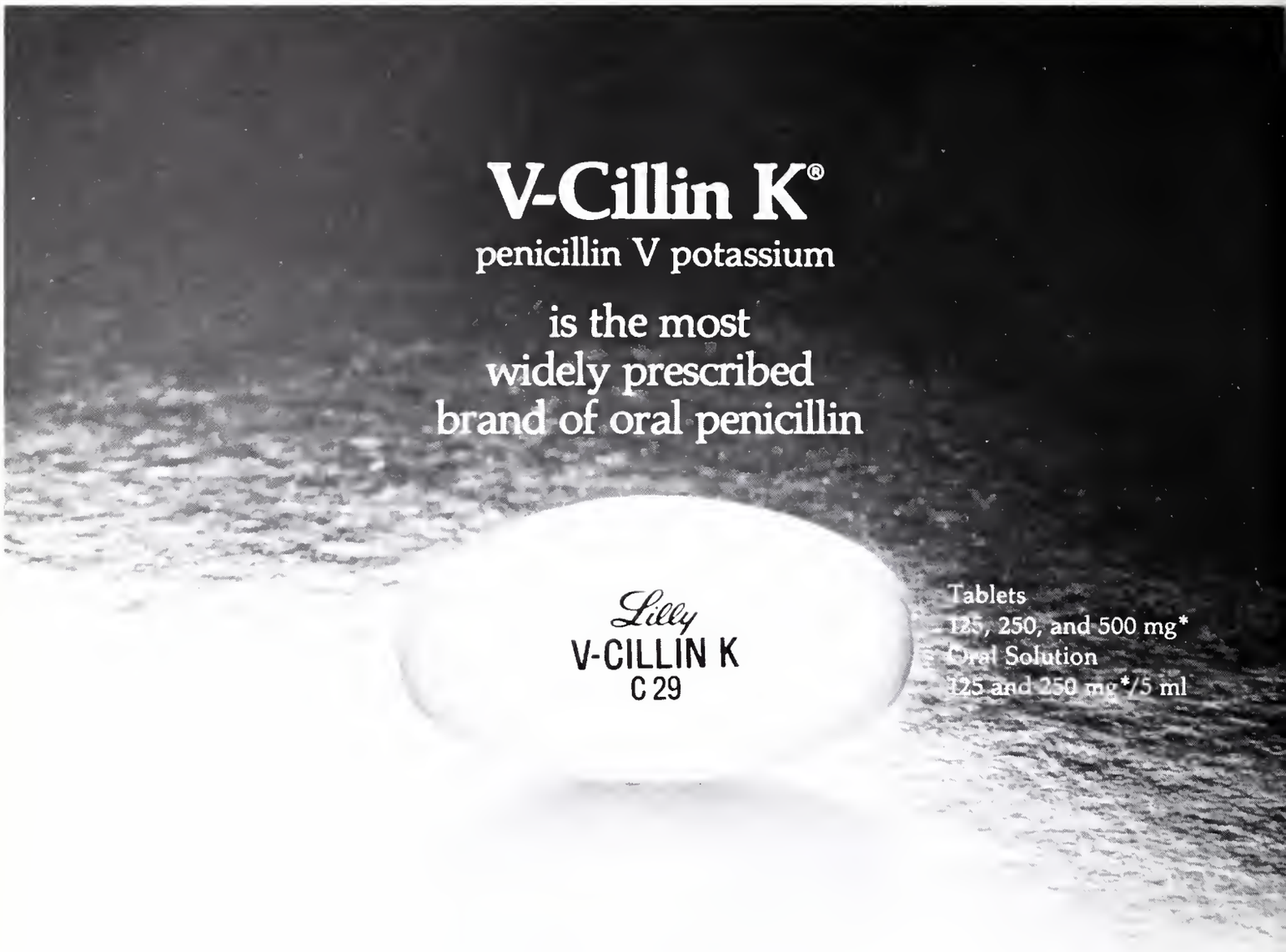

V-Cillin K®
penicillin V potassium

Description: V-Cillin K is the potassium salt of penicillin V. This chemically improved form combines acid stability with immediate solubility and rapid absorption.

Indications: For the treatment of mild to moderately severe pneumococcal respiratory tract infections and mild staphylococcal skin and soft-tissue infections that are sensitive to penicillin G. See the package literature for other indications.

Contraindication: Previous hypersensitivity to penicillin.

Warnings: Serious, occasionally fatal, anaphylactoid reactions have been reported. Some patients with penicillin hypersensitivity have had severe reactions to a cephalosporin; inquire about penicillin, cephalosporin, or other allergies before treatment. If an allergic reaction occurs, discontinue the drug and treat with the usual agents (e.g., epinephrine or other pressor amines, antihistamines, or corticosteroids).

Precautions: Use with caution in individuals with histories of significant allergies and/or asthma. Do not rely on oral administration in patients with severe illness, nausea, vomiting, gastric dilatation, cardiospasm, or intestinal hypermotility. Occasional patients will not absorb therapeutic amounts given orally. In streptococcal infections, treat until the organism is eliminated (minimum of ten days). With prolonged use, nonsusceptible organisms, including fungi, may overgrow; treat superinfection appropriately.

Adverse Reactions: Hypersensitivity, including fatal anaphylaxis. Nausea, vomiting, epigastric distress, diarrhea, and black, hairy tongue. Skin eruptions, urticaria, reactions resembling serum sickness (including chills, edema, arthralgia, prostration), laryngeal edema, fever, and eosinophilia. Infrequent hemolytic anemia, leukopenia, thrombocytopenia, neuropathy, and nephropathy, usually with high doses of parenteral penicillin. [102175]

***Equivalent to penicillin V.**

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CHRONIC OTITIS MEDIA IN ALASKAN NATIVES: 1954 - 1979
An Historical Perspective

Elizabeth A. Tower, M.D.

Any attempt to gain an historical perspective on a health problem must start somewhere. Since my own personal contact with health problems in Alaska began in 1954, inevitably I return to the Parran report: "Alaska's Health - A Survey Report" which was published that year.

The Parran report was prepared by a team headed by Dr. Thomas Parran who was at that time a faculty member of the University of Pittsburgh Graduate School of Public Health. The study had been requested by the Territorial Legislature and Governor of Alaska and was contracted for by the U. S. Department of the Interior which was at that time the governmental department responsible for the Alaska Native Health Service. The Parran report did not provide the documentation of overwhelming ear problems that I had expected. However, the observations may not have been made in the high incidence area of Southwest Alaska.* The Parran report did however deal with the suggestion that mass application of tonsillectomy and adenoidectomy might be a solution to the problem:

> "It would be a formidable task if the only solution were mass tonsillectomy and adenoidectomy and mastoidectomy. If that is the answer, a way must be found to do it, but short of aiming at this conclusion, careful and intensive study projects should be set up to determine the efficacy of energetic antibiotic and local treatment of the ears."

Studies ensued and the complexity of the "otitis media problem" in rural Alaska was recognized and well described in 1956 by a team of pediatricians and otologists who surveyed eye, ears, nose and throat infections in Alaska under auspices of the Territorial Department of Health with funding from the U. S. Children's Bureau. The following were their observations:

> "1. The team was impressed by the close relationship between presence and severity of chronic ENT disease on the one hand and such factors as presence of other chronic disease, diet and nutritional status, adequacy of housing and clothing and personal hygiene - - -.
> 2. There is an equally important relationship, case for case and family for family, between the amount of chronic ENT disease in the children and the educational level and the socio economic level of their parents - - -.
> 3. We know that beyond doubt ENT disease causes a quantity of auditory impairment in Alaska, and that it is in almost all cases preventable. At the same time one is constantly amazed by the amount of ENT disease a child can sustain without becoming handicapped or deaf as an adult - - -.
> 4. The amount of chronic ENT disease in a community is related to availability of medical facilities only if the parents or other responsible persons are aware and concerned about the dangers, if the medical facilities are adequate for the number of people and the amount of their disease, and if the

*Subsequent studies on a cohort of 378 Southwestern Alaska Eskimo children born in the early 1960's indicated that 31% had shown a 26 db or more hearing loss by age five.

Elizabeth A. Tower, M.D., Southcentral Regional Health Officer, Alaska Division of Public Health, Anchorage, Alaska.

parents are physically and intellectually able to follow through on medical treatment - - -."

In spite of the recognition of all these factors the final recommendations focused on the surgical procedures which at that time in ENT history was considered an answer to the "otitis media problem" as is demonstrated by the following statement:

> "There is a large backlog of surgery (both curative and preventative) which is needed right now. It is most conservatively estimated that in the Eskimo population of 16,000 there are 2,785 persons needing T & A and 739 needing mastoidectomy. There is also a considerable amount of surgery to be done among the other Native races. Full time otologists and anesthetists are needed for several years. The surgery program should be continuous."

In the ensuing years an extensive ENT surgery program was undertaken by the Alaska Native Health Service focusing on T & A's and mastoidectomies until 1969 when the technology of tympanoplasty surgery became available. In the early 1960's it is estimated that one surgeon at Alaska Native Medical Center individually did over 3,500 T & A's. Numerous additional T & A's were done by other staff of the Alaska Native Health Service and by contract physicians.

The final recommendation of the 1956 survey was:

> "In the isolated villages a program of health education is needed to increase family responsibility for, and knowledge of hygienic measures, home treatment, and awareness of need for medical and nursing care. Native aids should be trained and utilized. Prophylactic antibiotic therapy might be tried."

As a result of this recommendation, the Children's Bureau funded and the State of Alaska Department of Health and Welfare administered **The McGrath Project - A Demonstration Study on the Prevention of Upper Respiratory Disease** which was published in 1962 after an intensive program of health education and medical treatment in 6 Kuskokwim and Yukon villages supervised by a project physician located in McGrath.

In the two years of the study 1957-1959, it should be noted that 67.8% of the cases of chronic otitis media, defined as "a drainage from the middle ear or an inflammation of the middle ear of more than two months duration", healed spontaneously with medical treatment but without surgical intervention and 48.3% of the perforations noted at the start of the study in 1957 were healed in 1959 without surgical intervention while 72.8% of the ears that perforated during the study were noted to have healed with medical treatment. Even more significant was the comparison of the children under 2 when the study began in 1957, among whom 18 out of 105 were found to have chronic otitis media, with the 75 children born during the study and under 2 in 1959, among whom no cases of chronic otitis media were found when the project ended.

The McGrath project was considered a success and an adequate demonstration that increased efforts in health education and improved emphasis on adequate medical treatment could significantly impact the "Otitis Media problem." Although no concentrated health education program directed specifically at otitis media has continued, access to early medical care has been facilitated by the evolution of the current village health aide training programs However, the emphasis of the rural ENT program continued to be surgical and by the time that the Arctic Health Research Center proved with a double-blind controlled study in the Bethel area in 1967 that tonsillectomy had little bearing on the development or resolution of chronic otitis media, the technique of tympanoplasty was well recognized and efforts were being made to repair surgically the backlog of perforated ear drums in rural Alaska.

The Alaska Native Health Service received special funding for an Otitis Media Project which has amounted to approximately $500,000 yearly with a total expenditure of at least 4 million dollars.

Since the start of the ENT project it is estimated that 3570 tympanoplasties have been done at the Alaska Native Medical Center in addition to the ongoing cases requiring mastoidectomy and more recently myringotomy with insertion of ventilating tubes. In addition over 500 ears have been operated on at the Alaska Native Health Service field hospitals from 1974-1978 by PHS staff. The primary involvement of the State Division of Public Health in assuring care for these cases of chronic otitis media eligible for care at the Alaska Native Medical Center has been through the Handicapped Children's Program (formerly CCS) which has provided funding for transportation to ANMC with public health nurses making travel arrangements. Additional surgical treatment has been provided through a cooperative arrangement with the New York Eye and Ear Infirmmary with location of an ENT surgical resident at the Mt. Edgecumbe Hospital in Sitka between 1969 and 1977. It is estimated that 761 major procedures including tympanoplasties, mastoidectomies and 666 minor

procedures such as myringotomy and tonsillectomy were done through this program from 1969 - 1975.

In 1973 when Alaska entered into the Federal Medicaid Program, the Section of Nursing of the Division of Public Health contracted to provide services under the EPSDT Program. This led to the identification of Medicaid eligible children in rural Alaska with chronic otitis media and perforated ear drums. Under the presumption that surgical treatment was indicated in more cases than could be handled through the ANMC ENT Department, large clinics were arranged primarily in the Bethel and Kanakanak areas utilizing ENT surgeons in private practice who were paid between $1,200 and $1,500 per case. In 1977-78 approximately 250 tympanoplasties were done in contract clinics in the Southcentral region. Additional contract surgical clinics have been held in Nome and Kotzebue with funding through Medicaid and the Alaska Native Health Service contract office. Much of the surgery in the Fairbanks and the outlying Tanana Service Unit has been contracted with private ENT surgeons practicing in Fairbanks. A conservative estimate is that a least 5,000 tympanoplasties have been performed on the ears of Alaskan natives in the past 10 years. Six ENT surgeons initially employed by the Alaska Native Health Service have elected to enter private practice in Alaska and the Alaska Native Medical Center is currently staffed by 4 ENT surgeons.

During the past year a provocative article "Chronic Otitis Media and Hearing Loss in the Eskimo Populations of Canada" by James D. Baxter, M.D. has appeared in the September 1977 issue of **Laryngoscope** and precipitated a reevaluation of the direction in which the treatment program for otitis media is proceding in Alaska. The following is quoted from the conclusions of this paper:

> "The benefits derived from medical treatment and surgical treatment of chronic otitis media in Canadian Eskimos have been evaluated in the projects and survey that have been presented. The benefits of the medical or conservative treatment of chronic otitis media are demonstrated by the project in the Nakasuk Elementary School at Frobisher Bay. The results obtained by reconstructive middle ear surgery — Tympanoplasty Type 1 — in the Eskimo population of the Inuvik and Fort Smith Zones of the Northwest Territories have been evaluated by an inter-university survey. The evaluation revealed that 50% of the ears operated on were successful after one or more operations and that only 39% of the Tympanoplasty Type 1 operations performed were successful. There was documented evidence in the medical records that approximately 10% of these successful results could be attributed to spontaneous healing after surgery.
>
> A surgical success rate of 39% for Tympanoplasty Type 1 does not justify the procedure on a "routine basis" as it has been so frequently applied in some regions, when one considers that there is evidence of spontaneous healing of ears in Eskimos up to 33% as at Cape Dorset on Baffin Island during a four year period between 1968 and 1972.
>
> There is justification for medical treatment. There is evidence from Alaska that abnormal hearing was associated with early onset of otitis media, but was most affected by the total number of episodes of suppuration. It is beneficial if the number of episodes of suppuration can be decreased. This benefit has been clearly demonstrated by the project in Nakasuk Elementary School at Frobisher Bay.
>
> The evidence indicates today that the management of the problem of chronic otitis media in the Canadian Eskimo lies along two pathways. As the Eskimos cannot return to their old, traditional, isolated way of life, we must introduce measures to improve the general state of their lives, i.e., nutritional, social, economic, etc.
>
> It would seem reasonable that medical or conservative treatment be applied to chronic otitis media in Canadian Eskimo children. The patients should be followed and treated medically, when necessary, in view of what is presently known about the natural course of the disease. Minor surgery, such as removal of granulation tissue from the middle ear, should be applied only as an adjunct to medical treatment during the first decade of life in very selected cases.
>
> Reconstructive middle ear surgery should be deferred in childhood and be applied in later life, only to those cases that have not healed as a result of the natural course of the disease and only following thorough medical treatment."

It has not been possible thus far to obtain comparable figures on the tympanoplasty surgery done in Alaska over the past 10 years since there has not been systematic follow up of the operated cases and since there is no comprehensive repository of information on

The Maker

Examining a Few Myths About Prescribing.

Increasing pressure is being put on the practicing physician to prescribe drugs generically. You are told that brand-name products are universally "expensive" and generic versions are relatively "cheap." To make this case, the most extreme (rather than typical) price differentials are cited. Thus, consumers are led to believe that such differentials are commonplace. Even your knowledge and your motives as a physician are questioned.

Understandably, these views have created myths. We think it's time to examine them in the light of all the facts and ramifications.

MYTH: There are no differences in quality and performance between brand-name products and their generic counterparts. The corollary is that there are no differences among products made by high-technology, quality-conscious, research-based companies and those made by commodity-type suppliers.

FACT: The Food and Drug Administration does a good job in monitoring a generally excellent drug supply. Still, it has nowhere near the resources to guarantee the quality and bioavailability of all marketed products at any given time. Just a few months ago, for example, it noted that batches of tetracycline HCl capsules which met official monograph requirements were not bioequivalent to a reference product. As you know, there is substantial literature on this subject affecting many drugs, including such antibiotics as tetracycline and erythromycin. The record on drug recalls and court actions affirms strongly that there are differences among pharmaceutical companies and their products. Research-intensive companies have far better records than those that do no research and may practice minimum quality assurance.

MYTH: Industry favors only "expensive" brand names and denigrates all generics.

FACT: PMA companies make 90 to 95 percent of the drug supply, including, therefore, most of the generics. Drug nomenclature is not the important point; it's the competence of the manufacturer and the integrity of the product that count.

Matters.

MYTH: Generic options almost always exist.

FACT: About 55 percent of prescription drug expenditure is for single-source drugs. This means, of course, that for only 45 percent of such expenditure, is a generic prescribing option available.

MYTH: Generic prescriptions are filled with inexpensive generics, thus saving consumers large sums of money.

FACT: Market data show that you invariably prescribe—and pharmacists dispense—both brand and generically labeled products from known and trusted sources, in the best interest of patients. In most cases the patient receives a proven brand product. Savings from voluntary or mandated generic prescribing are grossly exaggerated.

MYTH: Drugs account for a major portion of the rise in health care costs.

FACT: Drugs represent a very small part of such costs. The amount of the health care dollar spent for prescription drugs was about 12 cents in 1967; today it is about 8 cents. And you as a physician are most conscious of how drug therapy can cut hospitalization, avert surgery, reduce office visits and keep patients on the job.

MYTH: Government intrusions into the marketplace will save tax money.

FACT: Government schemes always cost the taxpayer something, and the costs often exceed the benefits. Certainly, any federal "help," such as lists of wholesale drug prices sent to all physicians and pharmacists, will be no exception. Just think of the expense of keeping them current! Moreover, wholesale prices are poor guides to actual transaction prices and even worse guides to retail prices.

The PMA Position

We believe your freedom to prescribe, either by generic or brand name, should be totally unabridged. Otherwise, your prescribing prerogatives and your relationships with patients will be seriously impaired.

The maker does matter

After the myths about price and equivalency have been shattered, one fact stands out more clearly than ever: *The maker does matter.* As always, your best guide to drug therapy for your patients is to select products—both brands and generics—from manufacturers with credentials and performance records you have come to respect.

PMA

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

exactly who has had surgery. However, since much of the surgery done on children under 21 has involved referral to the Division of Public Health Handicapped Children's Program, it has been possible to analyze these records and make partial lists of post-operative cases which have been provided to ENT surgeons, audiologists and public health nurses in the Bethel and Kanakanak service units in order to get information on the subsequent clinical course and current status of the ear drums and hearing in these cases. This analysis is incomplete and will be proceding throughout the year.

But reasonably complete data from four Dillingham villages and three large Bethel area villages indicate long-term results only slightly better than those quoted in the Canadian article with a success rate of initial Tympanoplasty 1 procedures of approximately 50% in terms of currently having an intact ear drum without the necessity of further surgery (it was not possible to analyze comparative hearing levels before and after surgery in previously operated cases at this time). When compared with the 1959 figures quoted in the McGrath Study of at least 50% spontaneous healing with medical treatment, it appears justified to pursue a conversative course in regards to surgical treatment in designing an ongoing ENT program for rural Alaska. When looked at longitudinally there has been much improvement in the general status of ears in rural Alaska.

Data analysis by Alaska Native Health Service indicate that the majority of the remaining problems are in Southwest Alaska but that even in these areas the percentages of school entrants with perforated ear drums and/or hearing loss has significantly decreased. However it is estimated the 20% of school children in these sections of rural Alaska still fail auditory screening which is 4 times the national average.

Acute and chronic otitis media still rank high on the list of leading health problems of Alaskan Natives. Recent observations of field physicians, public health nurses and audiologists indicate that there may still be approximately 815 perforated ear drums in the Bethel Service Unit alone. However analysis of these figures in several villages that have been evaluated recently by a physician's assistant with extensive ENT training indicate that this does not represent as large a surgical backlog as might be assumed. Of those school aged children who might be considered prime surgical candidates, most have either refused surgery or are considered to have received maximum surgical benefit after two or more reconstructive procedures on the same ear. Some of the remaining are healing spontaneously with adequate conservative medical treatment including ear drops and mechanical cleaning with suction while others with pin-point perforations are being treated with a simple Derlacki paper patch procedure which does not necessitate hospitalization or anesthesia. Many of the adults that might benefit from surgical treatment refuse to consider it at this time.

The status of myringotomy and insertion of ventilating tubes in the treatment of chronic serous otitis media is still a much debated subject throughout the country. Undoubtedly, it may be beneficial in certain cases to protect hearing during the peak period of language acquisition. However, there are inherent dangers in regard to percipitating chronic infection, scarring and ear drum perforation especially in areas where medical surveillance and personal hygiene are questionable.

A pilot study was done in Bethel area Headstart villages in 1976 under the auspices of RuralCAP. Follow up a year later showed mixed results but little enthusiasm for undertaking a more widespread program. These cases are now receiving long-term follow up and some are being found to have developed considerable tympanosclerois. Others have persistant perforations at the myringotomy site which are requiring Derlacki procedures or tympanoplasty to close. Although controls were not matched initially with those cases receiving myringotomy and tube insertion, an effort is now being made to compare this cohert of children in the Headstart villages with the same age group in other villages and also with the cohert groups immediately older and younger in the same villages in respect to the resolution of anatomical and auditory ear problems and to educational achievement.

This background material is not meant to refute the need for surgical treatment in some cases of chronic otitis media but rather to focus attention on the individualized identification and treatment of each case in the most cost effective and least truamatic manner rather than focusing on numerical listings as representing a surgical backlog. Futhermore, improved audiologic diagnostic and rehabilitative follow up is needed on the more than 5,000 ears upon which surgery has been performed over the past ten years, many of which still demonstrate a functionally handicapping hearing loss.

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Swimming Safety Rules Save Lives

Swimming Rules Set

Swimming, one of the most popular of summer sports, can be a healthful, stimulating part of the summer vacation. On the other hand, swimming can be one of the most dangerous of outdoor pastimes.

The American Medical Association reminds that healthful swimming begins with clean, sanitary water. Water is an easy and quick means of transmission for many disease organisms, and inevitably swimmers will swallow some water. Swim only in approved areas where the water is clean and free from pollution.

Swimming can be dangerous. Deaths from drowning can occur at any age. Inability to swim, inexperience, carelessness, poor judgment or lack of supervision are causes of most water accidents. Infants and toddlers need constant supervision by adults who themselves practice good water safety rules.

Swimmers must know their limitations. The depth of the water should be checked and hidden rocks and stumps located before diving. Swimmers should always have someone else along, and preferably swim where a lifeguard is near. Remember that salt water and surf can be more tiring than swimming in a quiet pool or lake.

The swimmer in trouble often can survive if he or she stays calm. Assume a face-up floating position, keeping hands under the water, and move hands and feet slowly. It is possible to stay afloat for hours with relatively little effort. But thrashing the water in panic will exhaust the endangered swimmer quickly.

Each member of the family should be coached in the fundamentals of swimming safety, and especially mouth-to-mouth resuscitation procedures.

July, 1979
Frank Chappell
Science News Editor
AMA

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TUBERCULOSIS IN TOKSOOK BAY

Elfrida H. Nord

> ". . . Continued decline in the incidence of disease depends on a high index of suspicion and recognition of minimal infections with the tuberculosis bacilli. We may expect a few cases of tuberculosis occurring in each community, depending more than anything else on the number of infected individuals living in the community."*

Toksook Bay is a predominantly Eskimo village of 365 individuals located on the outer side of Nelson Island right on the Bering seacoast. It is a new village, approximately 20 years old, composed mainly of families from Tununak, Nightmute and Newtok. There is daily communication and travel between these villages with close ties and family interrelationships.

Toksook Bay's major subsistance resource is the Bering Sea. They catch seal, walrus, salmon and other fish in season. As a subsistance village, it has a better base than most. The village has at least two well stocked stores, a B.I.A. grade school and a Regional High School with boarding students mainly from Nightmute and Tununak. It is serviced, weather permitting, five days a week by Sea Airmotive and twice weekly by Bush Air Service. Planes frequently prefer to land at Tununak. The village is almost 100% Roman Catholic. Most social activities evolve around the church, bingo and movies. Many of the villagers congregate at the schools to play basketball and other sports.

Primary health care is provided by one full-time community health aide and one part-time community health aide. An alternate health aide is also available. Most homes have CB radios and one is available in the Health Center. The Health Center is housed in the same buildings as the telephone, post office and Head Start facility. The state itinerant public health nurse makes a visit to the village approximately every three months and a Public Health Service physician once or twice a year. Medical services otherwise are available at Bethel P.H.S. Hospital, approximately 120 air miles away.

CASE A

In November, 1975, a twenty-two year old Eskimo male from Toksook Bay had a sputum culture reported as positive for *M.tuberculosis*. He had converted his tuberculin skin test between September, 1972 and December, 1973 with no record of INH preventive therapy. He was started on Isoniazid and Ethambutol but after four months he was lost to follow-up.

In April, 1976, three sputa for AFB were submitted and reported as negative, but he was lost to follow-up again before medications could be reinstituted.

A sputum culture, submitted July, 1978, grew *M.tuberculosis* with total susceptibility to routine drugs. At that time, five family members were started on INH preventive therapy pending follow-up and Case A was placed on a drug regimen of INH and Rifampin after receipt of this culture report.

There was a rapid conversion to culture-negative status and he showed only minimal changes on chest x-ray. Four of five siblings converted their tuberculin tests to positive and two of these siblings showed x-ray evidence of active tuberculosis.

*From Foreword, **Tuberculosis Annual Report 1977**, Robert I. Fraser, M.D.

Pulmonary Disease Nurse Consultant, State of Alaska, Department of Health and Social Services, Division of Public Health, Section of Communicable Disease Control.

Tenuate® ℞
(diethylpropion hydrochloride NF)

Tenuate Dospan®
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence.* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy:* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children:* Tenuate is not recommended for use in children under 12 years of age.

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

ADVERSE REACTIONS: *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in midevening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.

OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

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Direct Medical Inquiries to
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References: 1. Citations available on request—Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M.: A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

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A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict appetite control and a successful program of weight reduction may tend to diminish the incidence or severity of the complications in some patients. Diethylpropion hydrochloride has been reported useful in such patients and while it is not suggested that Tenuate itself in any way reduces the complications of overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. **Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.**

In uncomplicated overweight.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

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The anorectic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.[1] And the unique chemistry of Tenuate provides "...anorectic potency with minimal overt central nervous system or cardiovascular stimulation."[2] Compared with the amphetamines, diethylpropion has minimal potential for abuse.

Tenuate—it makes sense. And it's responsible medicine.

*Studies have shown that obesity is associated with an increased incidence of hypertension, symptomatic heart disease, adult-onset diabetes, and other diseases.

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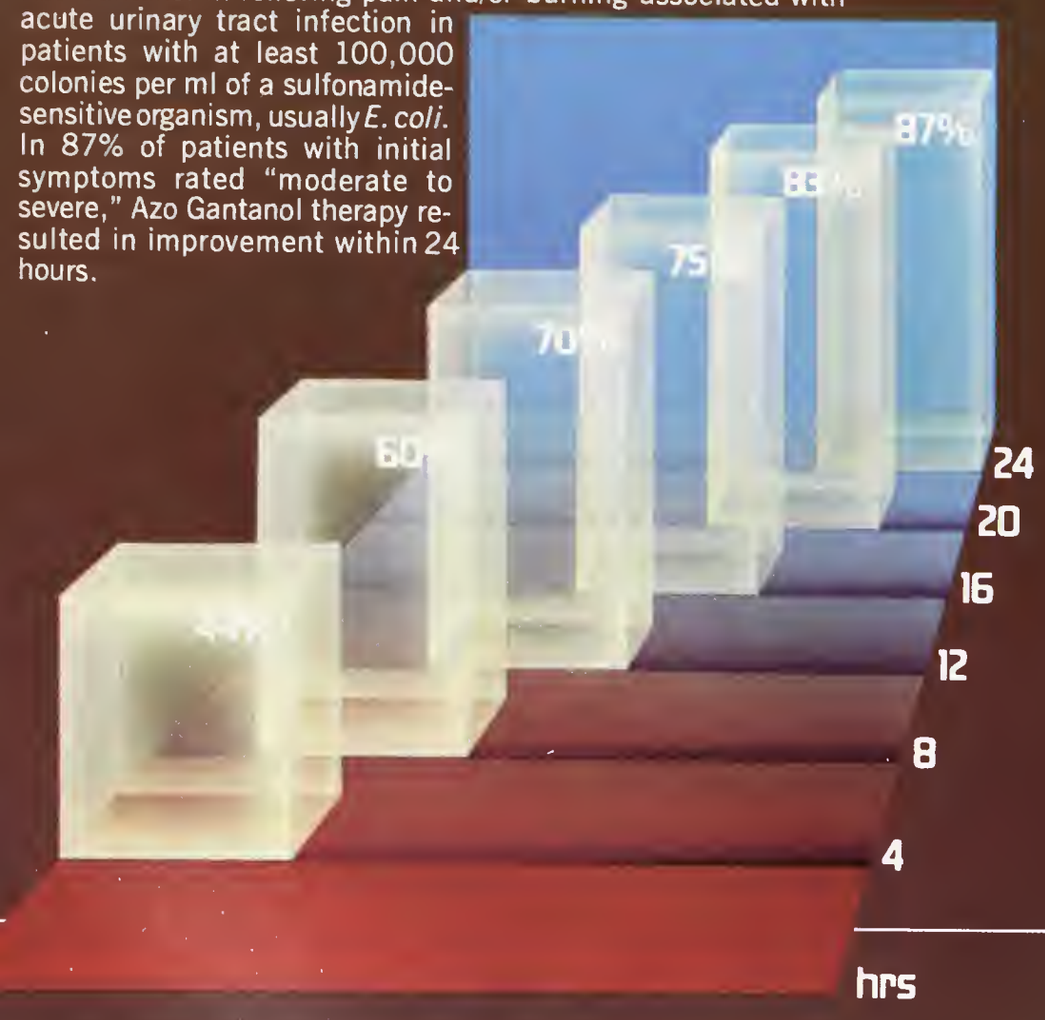

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for the pain **for the pathogens**

Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey 07110

Before prescribing, please consult complete product information, a summary of which follows:

Indications: In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis,* and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G.I. disturbances.

Warnings: Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *G.I. reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Azo Gantanol is intended for the acute, painful phase of urinary tract infections. *Usual adult dosage:* 2 Gm (4 tabs) initially, then 1 Gm (2 tabs) B.I.D. for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

NOTE: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine.

Supplied: Tablets, red, film-coated, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.

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CASE J

In August, 1978, a 22-year old Eskimo female from this same village was tuberculin tested for the Boarding Home Program and found to have converted from negative to positive. Sputum specimens were submitted which grew *M. tuberculosis* and she was started on INH and Rifampin in September, 1978. Minimal changes were noted on chest x-ray. Contact follow-up revealed no obvious source for her infection, no spread of infection from her and no connection with Case A.

CASE H

In early November, 1978, another 24-year old Eskimo female from Toksook Bay presented to the PHS Hospital in Bethel with symptoms of chest pains, and an apparent recent tuberculin conversion. An x-ray revealed a massive left pleural effusion. She was 16 weeks pregnant. After consultation, she was placed on INH and Rifampin. All cultures and biopsies subsequently were reported out as negative. Further review of records revealed a positive tuberculin test in 1960 with no history of preventive therapy. Contact follow-up revealed two converters in her in-laws' family.

With no apparent correlation between these three cases, it was obvious that a more thorough investigation of tuberculosis in Toksook Bay (TB in TB) should be instituted. In early December, 1978, a public health nurse, the pulmonary disease nurse consultant from State TB Control and a technical consultant from a pharmaceutical company made a trip to Toksook Bay to carry out an extensive tuberculin skin testing survey of the entire susceptible population. Two skin testing products were compared as a dual test in this survey. Five tuberculin units (5TU) PPD by Mantoux method was given on the volar surface of the left arm and a multipuncture device of Old tuberculin liquid was used on the volar surface of the right arm.

A village census was obtained and both Public Health and TB Control records were reviewed for prior evidence of infection with tuberculosis. Individuals with known positive tuberculin tests with or without preventive therapy were excluded from this testing program. When there was doubt about tuberculin status, the dual testing was done recognizing that there might be some positive reactions. Also it was planned to collect an induced sputum on all known previously positive tuberculin reactors or those with a previous history of active disease and obtain a chest x-ray of each of these reactions with a portable field x-ray unit. This portable unit takes standard 14X17 film. Educational programs were planned for the grade school and the high school.

New findings from this trip were:

20 individuals were interpreted as tuberculin positive by one or both tuberculin tests.

8 of these were considered to be recent converts; the other 12 were either older individuals with poorly documented tuberculin status or boarding students without local records.

Of the 133 chest x-rays taken at this time, none were interpreted as suspicious of unrecognized, reactivated tuberculosis. There were a few individuals with x-ray changes, infiltrates and other findings which were promptly followed up on, without identification of additional possible source cases.

Of the 93 sputa submitted for culture, one was reported as positive for *M. tuberculosis*; the specimen was from an individual who had just been identified as a converter.

The 8 newly documented converts were members of 7 additional family units without apparent correlation to the 3 previously documented cases.

Because there was still no clear idea of whether the source case had been identified and the spread of infection interrupted, a second trip was deemed necessary to do more investigation. In early January, 1979 the pulmonary disease nurse consultant went again to Toksook Bay, this time accompanied by a Medical Officer assigned to State TB Control. The plan for this second trip was to locate and do dual testing on every individual missed previously, collect sputum specimens and obtain x-rays on those with positive histories missed on the first trip and to re-x-ray and collect additional specimens from all persons with abnormal findings on x-ray indentified in December, 1978. It was also planned to do intensive interviewing of each family with a converter to see how relationships fit together as far as amount of contact with possible sources was concerned.

Additional data from this second trip were:

62 more x-rays, 41 more induced sputa collected and all except 8 individuals now have documented tuberculin status.

New findings were:

13 more documented positive findings and 3 doubtful tuberculin tests that will be retested at the next opportunity.

4 new converters were identified. The other 9 were either attributed to "booster

effect", or further investigation revealed a prior history of infection.

The 4 new converters were in 4 additional families. One of these converters had a sputum culture positive for *M.tuberculosis*. No positive cultures were obtained from individuals with prior history of tuberculosis.

As a result of this investigation, the tuberculosis infection status of 365 inhabitants (98% of the village population) was determined.

The investigation was complicated by the large number of previously infected individuals and the multiple record systems that needed to be reviewed. A total of 247 dual tuberculin tests were done and 8 individuals were tested with the multi-puncture tuberculin test only because of a temporary shortage of PPD in the village.

Through use of a village map and information obtained from Toksook Bay's City Hall, it was possible to locate family units with documented recent *M.tuberculosis* infection and do selective interviewing concerning the amount of contact between individuals and other family units.

After a review of the 195 chest x-rays taken by TB Control in Toksook Bay, no unidentified active disease cases were discovered and no positive cultures other than those documented in Case A and 3 converters have been found. TB Control derived that reactivated Case A must have been the source in 10 of the new conversions identified in December 1978. and January 1979 and the 5 other converters identified since August 1978. Of the other 5 documented converters, 2 are not satisfactorily explained as yet and 3 are attributed to other known culture-positive cases. The other 8 are older individuals who had inadequately documented tuberculin status but are not suspect of being recent converters.

In summary of this investigation, we have the following data:

Village population (transient population - 49)		373
Previously positive tuberculin tests and not considered subject to re-infection		117
Prior infection, no INH preventive therapy	13	
Prior infection, with INH preventive therapy	30	
Prior infection with active disease and one course of double drug therapy	66	
Reactivated on one or more occasions in addition to the active cases above	8	
Insufficient data to classify		8
New tuberculin positive individuals		28
Presumed uninfected as of 1/79*		220
		373

Twenty cases, or 71% of the new positive findings, are bona fide converters. The others probably are not recent converters but they have been infected.

Of the 20 cases considered bona fide converters, 10 are being treated with Isoniazid preventative therapy and 10 with double drugs for active disease.

At the present time there are 37 individuals on tuberculosis chemotherapy or INH preventative therapy in Toksook Bay. . .and the "infected rate" of the residents of Toksook Bay in January, 1979 is *38% if the total population*.

Tuberculosis was a major health problem in Alaska for a long time. The first systematic information on the extent of the problem was obtained by the Alaska Department of Health in 1949-51. 1952-60 was a period of intensive effort at recognition of new infections, hopitalization of active cases and ambulatory chemotherapy. This paid off in a dramatic decline in morbidity and mortality. About 1960 there was no longer a problem. What occurred was an increase in cases each year from 1961 to 1964 until the realization that tuberculosis was still a health problem in Alaska. More funds were obtained and programs reinstituted with a dramatic decrease to a more acceptable level which continued with slight variation until 1975.

In 1975 Alaska identified 74 new active cases; in 1976 there were 88; in 1977, 92 and in 1978, 94. Not a dramatic increase, perhaps, but at what point do we decide that even a slight increase is acceptable when we have had the technology, methodology and pharmaceuticals to eradicate the disease since the early 1950's?

Unfortunately, the health care providers, the general public, patients and their contacts generally perceive tuberculosis as a less serious health problem than it was in the past. A very recent report from the Center for Disease Control, Atlanta, Georgia stated that in 1977 there were still 30,000 cases reported in the United States - and 1,275 of these occurred in children under 15 years of age! The report also stated there are still more deaths annually in the United States from tuberculosis than all other notifiable diseases combined.

The pattern in Alaska is certainly not unique. But it is all the more tragic that this

*Includes boarding students and teachers.

disease should persist anywhere and increase due to apathy and lack of understanding on the part of the health care providers.

The non-compliant patient is and always has been a problem. Probably more often than health care providers care to admit, a lack of proper instruction and understanding contributes a great deal to non-compliance.

What happened in Toksook Bay is the most recent evidence of a problem that is likely to recur in any number of Alaskan villages if we allow apathy to continue. Tuberculosis is still as infectious as ever and the potential for active disease and spread to the uninfected segment of the population is predictable. Regional epidemics have occurred in the past, but isn't there something we can do to prevent their periodic occurrance in the future?

1. Tuberculin testing is still one of our best and least expensive monitoring tools available to determine if the non-infected population has become infected. To be a reliable tool, tuberculin testing must be done with skill, understanding and adequate diagnostic work-up. Contact follow-up on those who convert and coordination between all agencies is crucial to assure that the cycle of reactivation, with infection of the susceptible population, is interrupted as quickly as possible.
2. Sputum collection with examination for *M.tuberculosis* is a simple and effective procedure for detecting disease. It is readily available, requires a minimum amount of expenditure of time and effort and is possible to do at the village level. This is important when other health facilities are many miles away by air.
3. A real problem exists in trying to keep health care providers knowledgable about tuberculosis and motivated to practice prevention. The special problems are partly due to the fact that TB was a disease treated outside the general medical field by specialists in tuberculosis when it was a more serious public health problem. When adequate chemotherapy became available and it was possible to treat patients on an ambulatory basis, the incidence of TB declined sufficiently to allow the sanitariums to be closed and the treatment of tuberculosis to become a problem of general medicine. As the incidence declined, emphasis in teaching medical and nursing students about the disease also declined. Too often in the present day, health care providers do not gain knowledge about tuberculosis, its prevention and its treatment until they become involved with an active case and its contact follow-up.
4. Coordination between all health care providers and TB Control services is essential for recognition of problem areas so that prompt and appropriate action will be taken to monitor those with active disease and interrupt the transmission of infection.

In conclusion, if one truly believes the opening statement: "We may expect a few cases of tuberculosis occurring in each community, depending more than anything else on the number of infected individuals living in the community", it is imperative that tuberculosis be kept in mind in the foreseeable future. We obviously are a long way from eradicating tuberculosis in this village and it is just one example of many potential problem areas in Alaska.

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Direct contributions to this study are: David Alsobrook, M.D., Bethel Public Health Service; Lee Alward, M.D., Bethel Public Health Service; Julia Bill, Toksook Bay Community Health Aide; Ron Conley, Sales Representative, Lincoln Laboratories; Joe Felix, Toksook Bay Community Health Aide; Robert I. Fraser, M.D., Director, Division of Public Health, State of Alaska; Robert Haynes, Alaska State Public Health Nurse, Bethel Itinerant Service; Barbara L. Riley, M.D., Alaska State Medical Officer, Tuberculosis Control Unit; Tom Sanders, Alaska State Itinerant X-Ray Technician.

GROUP A STREPTOCOCCAL MENINGITIS IN AN INFANT: REPORT OF A CASE ASSOCIATED WITH A COMMUNITY OUTBREAK DUE TO M-TYPE 4 ORGANISMS

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ABSTRACT

Since the development of penicillin, Group A streptococcal meningitis is a rare occurrence. In January 1974, Group A streptococcal meningitis occurred in a 44-day-old Eskimo who had been born in a small village in southwestern Alaska. The child was severely ill with purulent otitis media. septicemia, pneumonia and seizures. The organism, serotype M-type 4, T-type 4, was isolated from ear drainage, blood and CSF of the infant. The child recovered but is abnormal in development. Culture results from routine streptococcal surveillance of school children revealed that an epidemic of Group A streptococcus M-type 4, T-type 4 occurred in the village at the time of the child's birth and that the organism had been isolated from throat cultures collected from school-age children in the infant's family. This situation points out that Group A streptococcal meningitis may be associated with community epidemics of streptococcal throat infection.

From the Alaska Area Native Health Service, Indian Health Service (Drs. McMahon, Brenneman, Hurwitz and Cannon), and the Alaska Investigations Division, Bureau of Epidcmiology, Center for Disease Control (Drs. Barrett and Bender), Public Health Service, U.S. Department of Health, Education and Welfare.

Group A streptococcal meningitis is currently a rarely reported disease since it occurs infrequently and because many clinical laboratories are unable to identify streptococci by group.[1] This report presents the clinical description of a recent case of meningitis due to Group A, M-type 4, T-type 4 streptococcus in a 44-day-old Eskimo infant and describes the interesting epidemiological aspects of streptococcal disease in the family and community that preceded the illness in the infant.

CASE REPORT

On January 28, 1974, a 44-day-old Eskimo male infant was hospitalized at the PHS Alaska Native Hospital in Bethel, Alaska with a 3-day history of fever, cough, draining ear and difficult breathing. Although it is intended that all expectant mothers come to the hospital for delivery, this infant had been delivered at home in Atmautluak, a small village of approximately 100 Eskimos located 30 air miles west of Bethel. His mother was assisted during delivery by a community health aide. At birth he weighed 5 pounds but the length of gestation and the infant's initial vital signs were not known. A few hours after birth, the

child was adopted by his maternal grandmother. At 27 days of age, when the infant was seen at the hospital in Bethel for routine well baby care, he was found to be developing normally.

The infant had a history of draining ears 1-2 weeks prior to admission but received no antibiotics. In the days prior to hospital admission, he became febrile, increasingly irritable and developed respiratory distress. On admission the child was responsive but in acute respiratory distress. Both tympanic membranes were perforated and purulent drainage was present. Auscultation of the chest revealed bilateral rales and rhonci. The fontanelles were full but no specific neurologic abnormalities other than irritability were found.

Lumbar puncture revealed 11 RBC/mm^3, 4,598 WBC/mm^3, (98% PMN, 2% lymphocytes), glucose 1 mg/dl, and protein 1600 mg/dl. Chest x-ray showed a right upper lobe consolidation.

Initially, the patient was begun on intravenous ampicillin 400 mg/kg/24 hours and intramuscular kanamycin 37.5 mg/12 hours. Within 48 hours, cultures of the blood, CSF and ear exudate yielded bacitracin sensitive beta hemolytic streptococci. Antibiotic therapy was switched to intravenous penicillin G, 500 mg/kg/24 hours. Grouping and serotyping later identified the organism from all sources as Group A, M-type 4, T-type 4 streptococcus.

Within 12 hours of hospital admission, the child became unresponsive and began having intermittant left-sided seizure acitivty. His left pupil was dilated and reacted slowly to light. Repeated subdural aspirations yielded no fluid. Despite phenobarbitol and one mannitol infusion, he continued to have seizure activity, although decreasing in frequency, for 3 weeks. One week after admission, the infant began to respond to external stimuli. The pneumonia and meningitis resolved although there was further deviation of the right eye. When examined 1 year after the onset of his illness, the child's motor development was retarded. He had a left esophoria and was thought to be blind in the left eye. At age 2½ years, the child had a vocabulary of about 20 words and did not make sentences. He was obese, could crawl but not walk.

EPIDEMIOLOGICAL ASPECTS

A unique situation allows this case to be put into perspective in relation to the distribution of the etiologic agent in the family and community. In 1971, a streptococcal-rheumatic fever control program was established in nine southwest Alaskan villages including Atmautluak. The program was designed to reduce the prevalence of Group A streptococci in remote communities by obtaining throat cultures from persons with acute symptoms of pharyngitis and weekly from a 25% sample of village school children. Each week the throat swabs were mailed to Anchorage for laboratory processing.[2,3] Each person positive for Group A streptococci was treated almost always with benzathine penicillin.

In Atmautluak during September 1973, Group A streptococci were isolated from throat cultures in 35% of asymptomatic school children tested. Most of the streptococci were M-type 4, T-type 4, (Figure 1). This constituted an unusually high rate particularly when the results of serotyping of organisms was considered. An effort to control the epidemic through treatment of individuals was unsuccessful until benzathine penicillin prophylaxis was given to all school children in mid-November. Thereafter the overall prevalence of Group A streptococci fell off gradually and that of M-type 4, T-type 4 even more rapidly. On December 15, at the time of the infant's birth, the prevalence of M-type 4, T-type 4 in the school children was about 10%. Table 1 shows that M-type4, T-type 4 was present in all three family groups which subsequently had close contact with the infant. Shortly before the infant's birth, this organism was present in two school-aged members of the child's adopting family. The prevalence of M-type 4, T-type 4 in the adult and preschool members of the three families is not known because they were not cultured.

DISCUSSION

Before the advent of antibiotics, all groups of streptococci accounted for approximately 10% of reported cases of bacterial meningitis. Most of these cases were thought to be due to Group A.[4] The introduction of penicillin reduced the incidence of streptococcal meningitis to less than 2%.[5] In the last 15 to 20 years, there have been very few reports of Group A streptococcal meningitis[6] while Group B streptococcal meningitis has become an increasingly important disease in neonates.[7-9]

There is only one previous report of a case of documented Group A meningitis associated with a streptococcal epidemic in the post-antibiotic era.[10] That report describes a neonate who acquired his infection during a type 12 Group A streptococcal outbreak in a newborn nursery linked to streptococcal pharyngitis in a staff nurse. In contrast, our patient was delivered at home and acquired his disease in a village that experienced a community-wide Group A streptococcal epidemic. Although we lack data to prove exactly how the infant acquired the infection, the organism was found

during the epidemic in members of all three households who had intimate contact with him during his first few days of life. Although mass penicillin prophylaxis of school children may have decreased the rate of Group A streptococci, especially M-type 4, T-type 4, in the school prior to onset of meningitis in the infant, the organism may still have been present in uncultured and untreated adults or preschool children in the home who then transmitted it to the baby. The initial clinical evidence of streptococcal infection in our patient was probably suppurative otitis media which was then followed by septicemia, right upper lobe pneumonia and meningitis.

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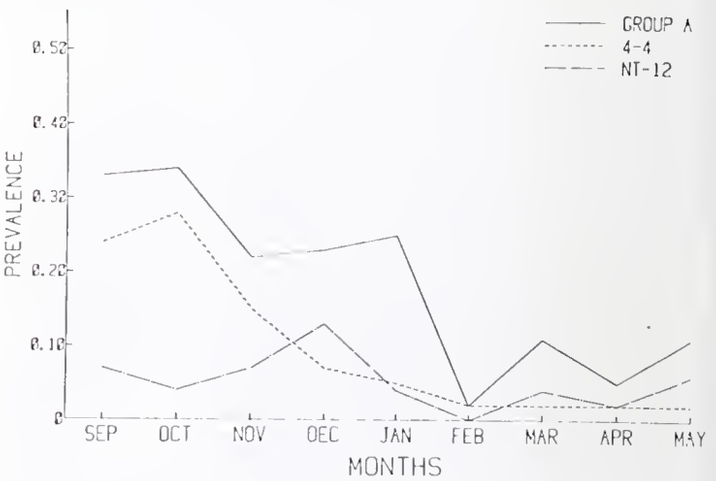


Figure 1. Group A streptococcal prevalence in school children of Atmautluak, Alaska, 1973-1974. Because of the epidemic prevalence in September and October, mass prophylaxis of school children with benzathine penicillin was performed on November 15. The infant who developed Group A streptococcal meningitis was born on December 15 and became ill in January.

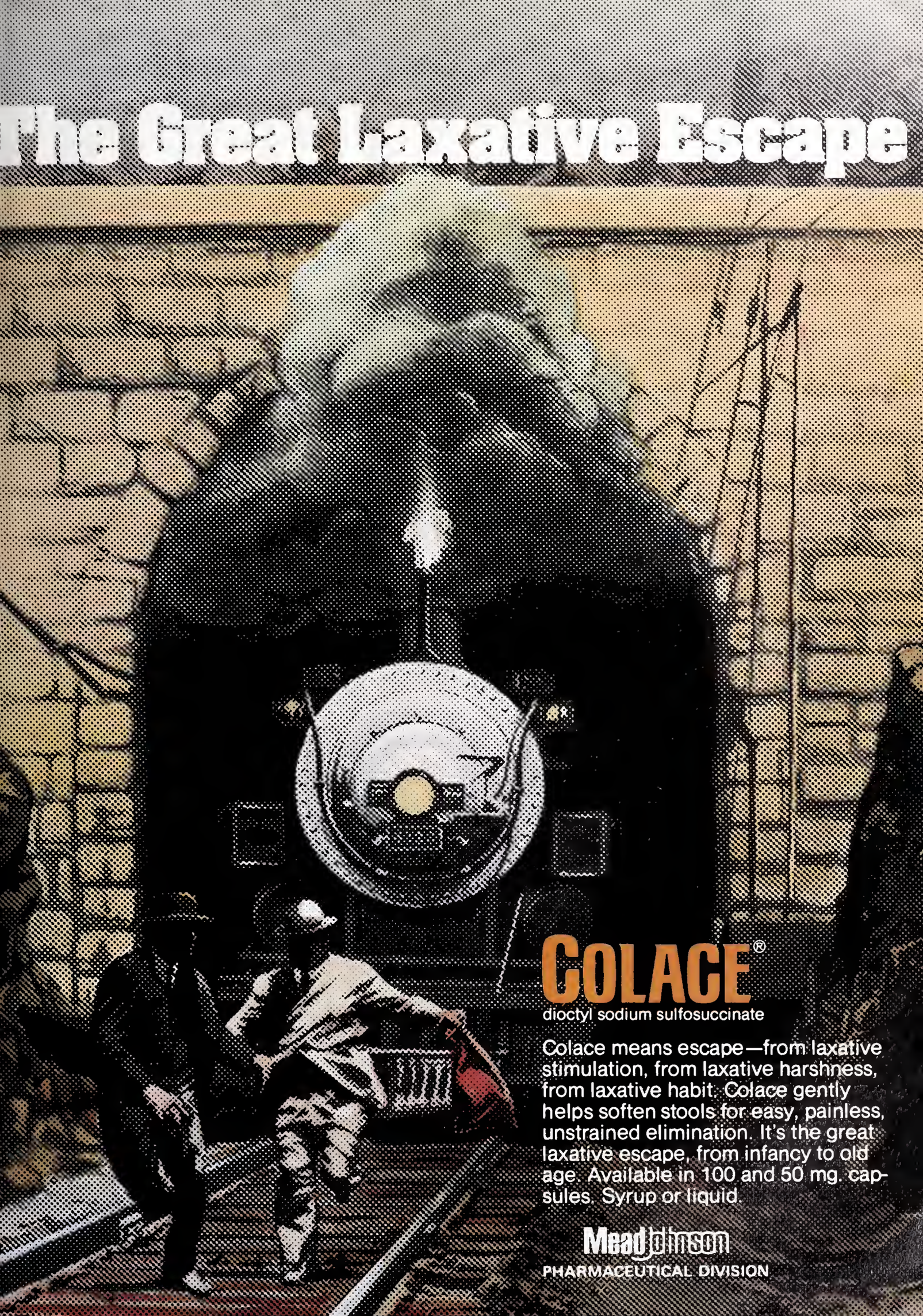
Table 1. Group A Streptococcal Pharyngeal Isolates from School-age Children Related to the Meningitis Patient. Parents and preschool children were not cultured.

1973-1974

Relation to Patient	Age (years)	Sep 5	Oct 2	Oct 16	Nov 5	Nov 19	Dec 3	Dec 10	Dec 17	Dec 27	Dec 31	Jan 7	Jan 14	Jan 28*
Adopted Family														
Sister	15	-		-		-	-				-			-
Sister	13	-		4/4		-	-				-			-
Brother	11	-	-		4/4		-			-				-
Sister	9	4/4	-		4/4		4/4		NT/12				NT/28	
Sister	7	-		4/4		4/4		NT/12				NT/28		
Genetic Family														
Sister	11	-		-		-	-				-			-
Brother	9			-		-		NT/12				NT/12		
Brother	8	4/4	-		-		NT/12		NT/12				-	
Brother	6	4/4	-		-		-			-				-
Related Family														
Cousin	10	4/4	-		-		NT/12			-				NT/28
Cousin	9	-		-		-		NT/12				NT/NT		
Cousin	7	4/4	-		-		-			-				-

*date meningitis discovered

4-4 = M-type 4, T-type 4
NT-12= non M-typable, T-type 12
NT-28= non M-typable, T-type 28
- = negative culture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COMPATIBILITY

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Vasodilan—compatible with coexisting diseases (e.g., glaucoma, diabetes)

Vasodilan has not been reported to affect the course of coexisting disease; it has not been reported to affect blood sugar levels or to raise intraocular pressure.

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Vasodilan—compatible with your total regimen for vascular insufficiency

Vasodilan can be a valuable adjunct in planning a total therapeutic program for vascular insufficiency.

***Indications:** Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.
Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral: 10 to 20 mg., three or four times daily
Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

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VASODILAN® 20-mg tablets

(ISOXSUPRINE HCl)

20 mg q.i.d. recommended dosage

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This asthmatic isn't worried about his next breath...

he's active
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Each capsule or tablespoonful (15 ml) liquid contains theophylline (anhydrous) 150 mg and glyceryl guaiacolate (guaifenesin) 90 mg

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Warnings: Do not administer more frequently than every 6 hours, or within 12 hours after rectal dose of any preparation containing theophylline or aminophylline. Do not give other compounds containing xanthine derivatives concurrently.

Precautions: Use with caution in patients with cardiac disease, hepatic or renal impairment. Concurrent administration with certain antibiotics, i.e., clindamycin, erythromycin, troleandomycin, may result in higher serum levels of theophylline. Plasma prothrombin and factor V may increase, but any clinical effect is likely to be small. Metabolites of guaifenesin may contribute to increased urinary 5-hydroxyindoleacetic acid readings, when determined with nitrosonaphthol reagent. Safe use in pregnancy has not been established. Use in case of pregnancy only when clearly needed.

Adverse Reactions: Theophylline may exert some stimulating effect on the central nervous system. Its administration may cause local irritation of the gastric mucosa, with possible gastric discomfort, nausea, and vomiting. The frequency of adverse reactions is related to the serum theophylline level and is not usually a problem at serum theophylline levels below 20 mcg/ml.

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See package insert for complete prescribing information.

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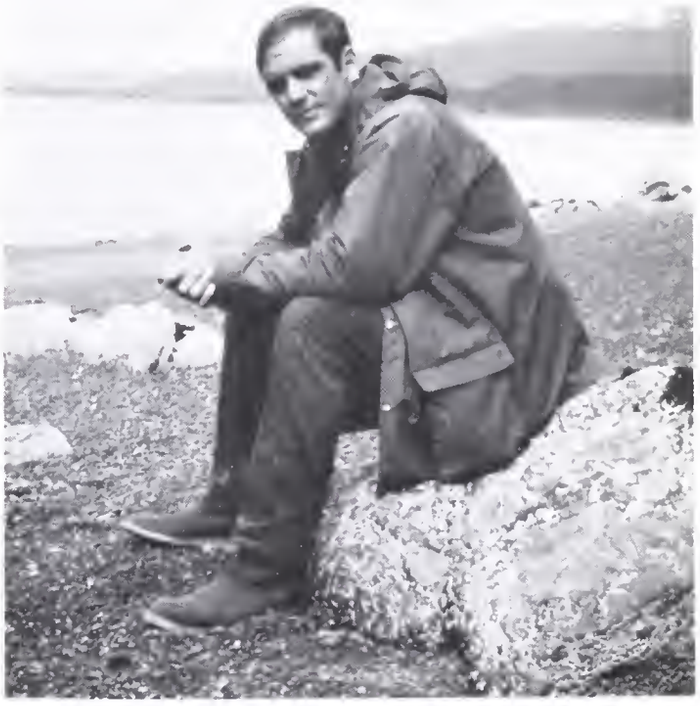
PRESIDENT'S PAGE



Douglas G. Smith, M.D.

I look forward to serving as President of the Alaska State Medical Association for the next 12 months with optimism. There are challenges to be met at local, state and national levels. Progress can be made with the help of an informed and active membership across the State.

Our office staff has increased and Martha MacDermaid has been promoted to Executive Secretary to take better advantage of her administrative talents. We hope this will increase our ability to communicate with the membership in a timely fashion.

We will continue to maintain a lobbying effort in Juneau during the legislative session. This is an expensive activity of the Association.

Restructuring or dissolution of the State Medical Board is a possibility in the near future. We will make every effort to influence such activity towards the best provision of medical care in Alaska.

Communication with the Department of Health and Social Services concerning the current Medicaid fiasco has been attempted during the past several months. So far this has been to no apparent avail. We remain ready to work with the Department, however, if they demonstrate a genuine interest in improving the program in a manner acceptable to all parties involved.

Medicine in Alaska is an effort that we share and can be proud of. We must not be afraid to respond in a positive way to those who would criticize our current system for purely political reasons.

I feel that we must make a greater effort on both the state and national level to inform the public of the true facts surrounding medical and social issues that will impact on the quality and quantity of medical care available in the future. One method of accomplishing this will be to expand the scope of activity of the Public Information Committee.

Membership in the Association has been growing in the past year. Future growth is necessary to allow representation of the greatest number of physicians in the State and to maintain our fiscal strength. Please talk to your non-member colleagues and urge them to join up and get involved.

I encourage you to express your opinions and air your problems. Communication is possible through local society meetings, contact with your local councilor or direct with the Executive Committee or myself.

DONALD B. ADDINGTON, M.D.

Donald Barrett Addington, M.D. died suddenly on Sunday, April 8, 1979. It was the first warm Sunday of the year. As was typical in recent years he was jogging and seemed fit. He leaves his wife Georgia, sons David and Jonathan and numerous friends.

Don grew up in the Phoenix area, attending UCLA and Jefferson Medical College. His general surgery training was at Bellevue Hospital in New York City. He took his plastic and reconstructive surgery residency at Nassau County Medical Center in East Meadow, New York under the professorship of Dr. Leonard Rubin.

He became the first practitioner of his specialty in the State of Alaska in 1968. Although his practice included all the areas of plastic and reconstructive surgery, cleft lip and palate and burn treatment were his special favorites. Many patients owe their lives and ability to function in society to his skills.

Don was instrumental in establishing the Alaska cleft palate team and the Thermal Unit at Providence Hospital. His professional achievements included fellowship in the American College of Surgeons and membership in the American Medical Association, American Burn Association, Cleft Palate Society and the American Trauma Society. Don was a diplomate of the American Board of Plastic and Reconstructive Surgeons. This year he was to have been proposed for membership in the prestigious American Society for Aesthetic Plastic Surgery.

While Don's professional credentials were numerous, he was known to many for his cultural achievements as gourmet, wine expert and lover of fine music. The latter was culminated by his election to the presidency of the Anchorage Concert Association.

As a long time friend, I was impressed by his ability to relate to people of all types. For under the occassionally gruff exterior, he was a kind and sensitive man. It was a privilege to call him friend and we will miss him greatly.

Robert E. Mallin, M.D.

RESOLUTIONS ADOPTED BY THE ALASKA STATE MEDICAL ASSOCIATION AT THE ANNUAL MEETING HELD JUNE 6 - 8, 1979 IN SITKA, ALASKA

Resolution No. 79-2
Submitted By: Anchorage Medical Society
Subject: Consumers and Providers

WHEREAS, physicians and their families and dependents, commonly called "providers", are as liable to illness, hospitalization, death with consequent financial drain and disaster as any other persons, commonly called "consumers", and

WHEREAS, members of the medical profession and their families and dependents are members of the public, sharing fully with the public the cost of government, and also share as fully the public's concern over costs and quality of medical care, and

WHEREAS, the medical profession by training and experience possesses talent in medical care not shared by the general public; therefore

BE IT RESOLVED, that "provider-consumer" distinction in medical care and in planning and governmental agencies be declared inappropriate, and

BE IT FURTHER RESOLVED, that Association members, officers and members of various planning and governmental agencies be urged continuously to propound their skill as "providers" while asserting as not debateable their full and equal voice as "consumers".

Resolution No. 79-3
Submitted By: Peter Rosi, M.D., Sitka
Subject: Requirement to Carry Medical Malpractice Insurance

WHEREAS, premiums for physician malpractice insurance coverage have increased at an alarming rate in the past few years, and have become an exorbitant charge which must be passed on to the the patient on the physician's bill, and

WHEREAS, premiums will increase due to the high cost of insurance administration, legal costs, impersonal relationships and the inability or unwillingness of insurance companies to control these costs, and

WHEREAS, physicians are losing the incentive to maintain the personal doctor-patient relationships once enjoyed due to the fact that physicians pay such high premiums regardless of skill, competence, and degree of care exercised, and

WHEREAS, the present uncontrolled malpractice insurance system does nothing to improve patient care and places an increasing financial burden on patients, while only a very small percentage of patients ever receive any benefit, and

WHEREAS, a very high percentage of the malpractice premium is dissipated in legal and court fees, and insurance company profits; therefore

BE IT RESOLVED, that the ASMA vehemently opposes any requirement by a hospital, or nursing home, whether public of private, or any law, ordinance, rule or regulation by local, borough, state or federal government that a physician carry medical malpractice insurance.

Resolution No. 79-4
Submitted By: Anchorage Medical Society
Subject: True Charity

WHEREAS, true charity is voluntary, and

WHEREAS, enforced "charity" is either taxation or servitude, and

WHEREAS, ethical obligations have definite parallels with legal obligations, and

WHEREAS, the AMA Code of Ethics states that a physician may choose whom he will serve; therefore

BE IT RESOLVED, that while affirming the traditional role of the medical professional in attending the ailing poor, the ASMA formulate no ethic obligating its membership to enforced charitable service and oppose any legislation of such intent.

Resolution No. 79-5
Submitted By: Anchorage Medical Society
Subject: Care of the Poor

WHEREAS, the ASMA affirms that medically indicated care should be available to persons with limited financial resources and affirms its obligation to assist society in providing needed care to such persons; therefore

BE IT RESOLVED, that the Association continue to assert its intention to assist the public in providing needed medical care for the underprivileged.

Resolution No. 79-6

Submitted By: Anchorage Medical Society
Subject: General Relief Medical Fees

WHEREAS, the State has reimbursed physicians for services under the General Relief Medical Program by the Medicaid formula instead of as billed, and

WHEREAS, no statutory requirement exists for such practice, therefore

BE IT RESOLVED, that the ASMA reject this arbitrary, discriminatory practice and direct strong protest to the Commissioner asking the Department of Health and Social Services for full explanation and reversal of this policy.

Resolution No. 79-7
Submitted By: Anchorage Medical Society
Subject: Medicaid Pre-authorization

WHEREAS, the decision for medical service, hospitalization, nursing home care, or intermediate care is best made by a physician having first-hand knowledge of a patient, and

WHEREAS, the necessity of these services is regularly reviewed by Utilization Review Committees which have direct access to the patient and his record, and

WHEREAS, the Medicaid medical director is usually in a poor geographic and clinical position to make these decisions, and

WHEREAS, as a result his decisions concerning pre-authorization are frequently untimely and inappropriate; therefore

BE IT RESOLVED, that Medicaid pre-authorizations for medical services and institutionalization be discontinued.

Resolution No. 79-8
Submitted By: Anchorage Medical Society
Subject: Medicaid Fees

WHEREAS, change of the Medicaid payment system from the "usual and customary" formula to a "Maximum allowable" system will reduce total Medicaid expenses only negligibly in as much as physician's fees now represent less than 6% of the Medicaid budget, and

WHEREAS, in other states converting to "maximum allowable" fees there have been sharp reductions in numbers of physicians participating in Medicaid with consequent loss of free choice and access to medical care; therefore

BE IT RESOLVED, that the ASMA is opposed to any action by the State Medicaid agency that would change payment from a formula based on usual and customary fees, or any other action that would limit the access of Medicaid beneficiaries to a free choice of physicians.

Resolution No. 79-9
Submitted By: Anchorage Medical Society
Subject: Maximum Allowable Relative Value Fee Schedules (MARVFS)

WHEREAS, relative value studies were never intended to compare the monetary value of medical services between medical and surgical disciplines, or compare the value of medical or surgical services with technical, laboratory or radiological procedures, and were specifically designed absolutely to prevent such cross-referencing and comparison, and

WHEREAS, the imposition of such monetary relative values on the medical profession by any external agency is demeaning to the profession as a whole and to its individual members and would be inherently inequitable for many reasons, and

WHEREAS, the mandatory imposition of MARVFS on the profession will

(a) inevitably produce dissension and strife within the profession, and
(b) degrade the practice of primary care by eliminating economic distinction from para-professionals, and

WHEREAS, government at all levels clearly intends to use MARVFS to control professional fees, and

WHEREAS, the MARVFS will inevitably become a minimum fee schedule in conflict with FTC ruling, and

WHEREAS, the State Department of Health and Social Services and Congress through S505 intend to impose MARVFS for Medicaid and Medicare, and

WHEREAS, this will degrade and ration medical care for the American people, increase bureaucracy, and produce minimal, if any, cost saving; therefore

BE IT RESOLVED, that the ASMA reaffirm the stand of the Anchorage Medical Society, the Fairbanks Medical Association, the Providence Hospital Department of Medicine, the ASMA Council and the ASMA Ad Hoc Committee on Medicaid, that MARVFS is unacceptable as a basis for reimbursement, and

BE IT FURTHER RESOLVED, that this resolution be conveyed to the AMA, state medical associations, major specialty societies, academies and colleges urging them to refuse to cooperate in formulation of a national MARVFS, and

BE IT FURTHER RESOLVED, that this resolution appropriately modified, be introduced to the AMA House of Delegates at its next meeting.

Resolution No. 79-10
Submitted By: Anchorage Medical Society
Subject: Mandatory Continuing Medical Education

WHEREAS, no problem has been demonstrated in Alaska which could be solved by compulsory CME; and

WHEREAS, no proof exists that compulsory CME, where implemented, has significantly altered the quality of medical care or has any bearing on public health, safety or welfare; and

WHEREAS, compulsory CME increases the cost of medical care and decreases its accessibility; and

WHEREAS, CME regulations ignore individual physician's tested, established self-educational patterns and techniques, and have many other defiencies, including easy evasion; and

WHEREAS, the learning process is willful and voluntary and cannot be compelled; therefore

BE IT RESOLVED, that the ASMA exhort the State Medical Board to assess what effects, if, any, on patterns

and quality of medical care are achieved by the regulations, at what costs; and

BE IT RESOLVED, that the ASMA begin education of appropriate legislators on the growing national concern that compulsory CME is wasteful, costly and ineffective.

Resolution No. 79-14
Submitted By: Winthrop Fish, M.D., Anchorage
Subject: Graduated Income Tax

WHEREAS, the graduated income tax coupled with inflation continuously erodes the purchasing power and investment capacity of the public, physicians included, and

WHEREAS, the graduated income tax by forcing wage and income increments in multiples of the inflation rate catalyzes and accelerates the inflation rate, and

WHEREAS, this cycle is particularly onerous and accelerated in Alaska with its initially higher cost of living and consequently necessary higher income and taxation rates, and

WHEREAS, the economic turndown is consequently also accelerated in Alaska with its discriminatory tax rates; therefore

BE IT RESOLVED, that the ASMA strongly urge the Alaska Congressional Delegation to work for lowering the progressive income tax rate, with indexing to inflation and cost of living, and

BE IT FURTHER RESOLVED, that this resolution be presented to the State Administration and Legislature for the same purpose relating to the Alaska State income tax.

Resolution No. 79-17
Submitted By: Winthrop Fish, M.D., Anchorage
Subject: Opposing National Catastrophic Illness Legislation

WHEREAS, the term "catastrophic" is relative lending itself to variable interpretation and political exploitation; and

WHEREAS, a national castrophic illness plan could be converted to total national health insurance by administrative fiat; and

WHEREAS, in this way Congress could escape the onus of having enacted national health insurance; and

WHEREAS, proposed national catastrophic health insurance has sections allowing control of physicians' fees in order, purportedly, to control costs; therefore

BE IT RESOLVED, that the ASMA oppose national catastrophic illness legislation and the position be forwarded to Delegates to present to AMA House of Delegates meeting in July.

Resolution No. 79-19
Submitted By: Resolutions Committee
Subject: Opposition to proposed medicaid regulations

WHEREAS, proposed state medicaid regulations contain many provisions which could compromise and ration necessary medical care for the poor, and

WHEREAS, requirements for written justification for treatment will further increase the already onerous burden of paperwork, and

WHEREAS, federal Medicare-Medicaid regulatory activity is progressively more intrusive and punitive, therefore

BE IT RESOLVED, that the ASMA oppose the proposed regulations as a deterrent to medical care for the poor and as a transparent governmental attempt to ration care, and

BE IT FURTHER RESOLVED, that the ASMA make public this position and the reasons supporting it.

Resolution No. 79-20
Submitted By: Resolution Committee
Subject: Commending Certain Physicians

WHEREAS, the Advisory Committee on Bodily Injury Reparation did an excellent job; and

WHEREAS, Michael Armstrong, M.D. and Arndt von Hippel, M.D. showed diligence, superior intelligence, and great good sense in writing their minority report;

BE IT RESOLVED, that the ASMA commend Dr. Armstrong and Dr. von Hippel wholeheartedly for their efforts.

Resolution No. 79-24
Submitted By: David E. Johnson, M.D.
Subject: Relations of Physicians with Third Parties

WHEREAS, physicians provide health care to individual persons as patients, and

WHEREAS, the doctor-patient relationship is one of mutual choice, respect and confidence, and

WHEREAS, patients may have arrangements with any of a wide variety of third parties, such as insurance companies or government agencies, to assist them in paying for services provided to them by their physicians, and

WHEREAS, the physician's relationship is with the individual patient and by definition not with the third party, therefore

BE IT RESOLVED, that ASMA hereby recognizes and acknowledges that a physician owes no duty to serve any third party, public or private, but rather owes the duty only to the patient, and

BE IT FURTHER RESOLVED, that ASMA recognizes that free mutual choice between physicians and patient is essential to satisfactory health care, and

BE IT FURTHER RESOLVED, that the ASMA recognizes no implicit or explicit responsibility for any physician to participate in any third party payment program.

Resolution No. 79-25
Submitted By: David E. Johnson, M.D.
Subject: Priorities in Health Care

WHEREAS, cost containment in health care has been emphasized in government communications and media presentations to the exclusion of virtually all other important health care considerations, and

WHEREAS, cost containment is but one important

social aspect of health care, others including quality, availibility, appropriateness, accessibility and acceptibility, and

WHEREAS, cost containment can be accomplished by prevention of disease, promotion of healthy life styles and proper distribution of health services better than by draconian budget limitations imposed by federal decree, and

WHEREAS, price controls particularly in one small segment of the economy, cannot possibly hope to accomplish anything useful, therefore

BE IT RESOLVED, that ASMA declares that quality of care and availability, appropriateness, accessibility, acceptability and cost of care are all important, and

BE IT FURTHER RESOLVED, that ASMA support all appropriate means of keeping cost increases to necessary levels without endangering all other important considerations in health care.

Resolution No. 79-26
Submitted By: Resolutions Committee
Subject: Thanking Speakers

BE IT RESOLVED, that the ASMA thanks the speakers at our 34th Annual Convention for their appealing and instructive presentations.

Resolution No. 79-27
Submitted By: Resolutions Committee
Subject: Thanking Exhibitors

BE IT RESOLVED, that the ASMA thanks the exhibitors for their generosity in supporting our convention.

Resolution No. 79-30
Submitted By: Council
Subject: Affixing our seal to AMA Physician's Recognition Awards

RESOLVED, that the ASMA allow its great seal to be affixed to American Medical Association's Physician's Recognition Awards for voluntary continuing education attainment by AMA members in Alaska.

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Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register*, 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

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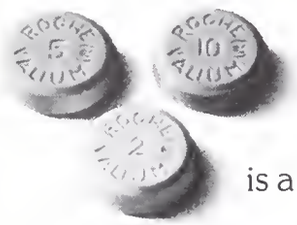
Please see reverse side for summary of product information.

ALASKA MEDICINE

Volume 21, Number 5 September 1979

A character all its own.



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Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

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The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10.

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ORIGINAL ARTICLES

FEATURES

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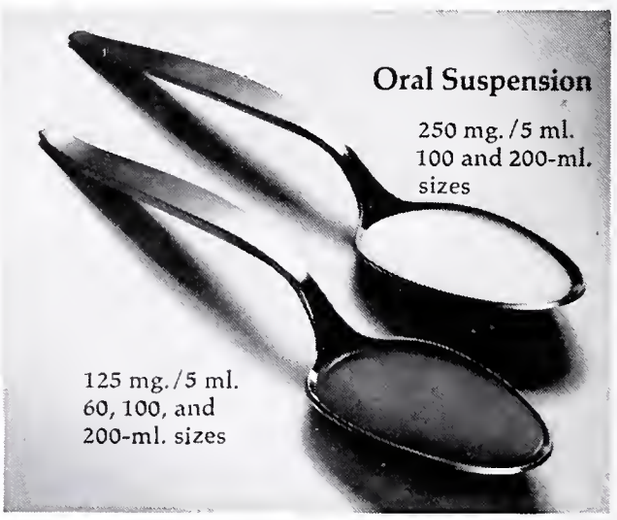

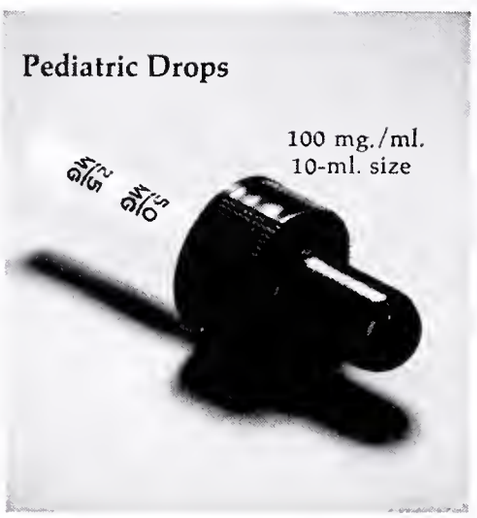

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PRIVATE PRACTICE PHYSICIANS AND COMMUNITY HOSPITALS: ENDANGERED SPECIES?*

Sherwin Memel

I've been given the task of answering the question whether private practice physicians and community hospitals are an endangered species. I'm going to speak on a geographic basis, encompassing the whole United States. Some of the things I will comment about may not yet have reached you here in Anchorage. New developments in the health field have a habit of traveling west from New York or north from California and sometimes just skipping across the country entirely when the Federal Government takes an action. In the latter case, you don't need any State action to have the same experience.

Starting out with humor, here is the first section of the Medicare Act. It's entitled, "Prohibition against Any Federal Interference." Section 1801—"Nothing in this title shall be construed to authorize any Federal officer or employee to exercise any supervision or control over the practice of medicine or the manner in which medical services are provided, or over the selection, tenure, or compensation of any officer or employee or any institution, agency or person providing health services or to exercise any supervision or control over the administration or operation of any such institution, agency, or person." Whenever I'm feeling down or want a laugh, I just pick that up and read it because there isn't a word of truth in it. Maybe it was intended to be that way by a few people, but that's not the way it turned out.

*Keynote address, Medical Staff Planning Congress, April 21, 1979, Providence Hospital, Anchorage, Alaska.

Sherwin Memel is an attorney in Los Angeles who specializes in hospital legal problems.

The first thing to do is take a look at the present stage of development with the Federal Government. There have been three stages of the role of government in health care. What we are all concerned about is government in health care because if we were still providing health care without extensive government involvement, we wouldn't be here today.

Historically, in Stage 1 the government wasn't involved at all in health care. The concept of government up to about the 1930s was very limited; it was a laissez-faire economy. The government was concerned with defense, foreign policy and protection of the currency, but that was it. People did what they wanted to. Those were the good old days. Around the '30s, during the Depression, we needed a lot of help and so in Stage 2 the government brought forth the New Deal.

That changed the concept of government. Government started having social problems, the Social Security Act, the WPA, the Conservation Corps. Then World War II came and with it tremendous mobilization. Industry was stimulated, production went up, revenues went up, the Gross National Product went up. There was income tax and the government coffers swelled. There was a great increase in the size and resources of govenment.

In 1946, the Hill-Burton Program was adopted by Congress. It was a concerted effort to finance the expansion of the health care system. Wherever a community could get the matching funds to put itself in a position to build a hospital, Hill-Burton was there to assist it.

In the 1950s, the central aim of public policy was assuring access to health care. In 1952, the President's Commission on the Health Needs of the Nation said, "Access to the means for attainment and preservation of health is a basic human right." This was the first time our nation articulated that concept. Later, Lyndon Johnson in 1966 said, "Our first concern must be to assure that the advance of medical knowledge leaves none behind. We can—and we must—strive now to assure the availability of and accessibility to the best health care for all Americans, regardless of age or geography or economic status." It was an expansionist era. We had all the resources in the world, we thought. There was no talk of era of limits or scarce resources or small is better.

The Medicare and Medicaid programs were passed and implemented from '66 through '67, and as those programs continued, the list of beneficiaries and the beneficiaries expanded. They expanded to include the disables of all ages. They expanded to include kidney dialysis; to erase the national disgrace of people dying who could be saved but for the fact we didn't have a program to save them and to eliminate those horrible committees that had to make the choice of who went on dialysis and lived and who stayed off and died.

And then we hit the third stage — the early '70s — rampant inflation. All of a sudden, people discovered that we had overpromised, underestimated the cost. We didn't know about energy crunches. We didn't know that taxpayers were going to say, "Enough. Don't take any more from me. I don't want to pay any more in taxes. Sure, I want to take care of people, I think these programs are great. Don't do away with them, but figure out another way to pay for them. Just don't hit me with more taxes." And we then found former allies becoming enemies. We found that labor was complaining that the big labor executives were in jeopardy because not enough money was going home to the workers in increases. They felt too much was going into premiums to pay the accelerating cost of health insurance policies. Employers were suddenly discovering that labor wanted them to pay the increased premiums and give them more money for take-home and that their costs were going up. General Motors was said to be paying more to health insurers than they were paying to United States Steel for the steel to go into their cars.

Everybody then began looking around for a scapegoat—somebody to put the finger on. Of course, it became the trustees and the administrators of community hospitals, who used to be the good guys and respected citizens. They were now "power mad." They had "Edifice Complexes" and they wanted to build their own memorials. Doctors were accused of wanting all those "new gadgets" to play with as toys. They weren't really interested in taking care of people. They just liked the bright shiny light that went on and off; wanted a new one every other week. They were just satisfying their egos and gouging everybody. All of a sudden we had fellows like Jerry Brown talking about the "medical industrial complex." Not the military industrial complex, the medical industrial complex. Physicians looked around and said, "Gee, I was a nice guy a couple of weeks ago. What happened to me?

What happened to you is that you began to fit the classic definition of a scapegoat. You were part of the second or third, depending on how you measure it, largest segment of the national economy. You were in the hospital field, where 50 to 60 percent of health care is now paid for by federal programs. Hospitals and physicians were just a nice little group where the government could come and snipe because they didn't have to hit equipment manufacturers, pharmaceutical manufacturers, laundry suppliers, food suppliers, and labor and all the people who were hitting you with increased costs and driving up the cost of care in the hospital and, of course, the other costs that were hitting the physicians as well in their own office settings. They could just hit doctors and hospitals as a nice clear target. What you did to solve these cost problems was up to you.

And so we were into that third stage of government as an adversary. That isn't to say that these government programs haven't been great programs for our people, Medicare and Medicaid and all the other programs such as cancer, heart, stroke programs that accelerated health care and availability and access. But it was to say this: that politicians weren't about to stick their necks out and cut down the benefits under these programs to reduce total expenditures on health care. They weren't about to take the political risk either of increasing co-pays and deductibles. But they were going to find a way to squeeze the dollars they were paying to providers for the increased benefits they had legislated in order not to have to increase taxes, in order to be able to have money for the military programs and for all the other needs of the Federal Government. So you began seeing attacks and a national thrust against providers paid for by governmental agencies.

You could pick up any publication and see an article such as — "Inside Our Hospital," *U.S. News and World Report* — showing a price tag on everything in the surgery room — Surgeon $2,500; Anesthesia, $460; and so forth. Every newspaper article, every television program had a barrage of anti-health care establish-

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ment publicity.

The efforts in health planning have been going on now for 20 years. We're on our third cycle now, with Public Law 93-641, of trying to control costs through allocation of beds and resources, and it's been a failure. And it's going to continue to be a failure. It's an illusion.

The only way we are going to control health care costs is also by controlling demand, but government is trying only to control supply. It is unwilling to face the necessity of controlling demand. There is the question of the ethical, moral and legal aspects of who shall live and who shall die. That's where the action really is. Who's going to make those decisions? Is government going to make them? Or is government going to hide behind you and force you to make those decisions by not giving you the funding to take care of those people?

Public Law 93-641 has a series of ten national priorities. It is titled the National Health Planning and Resources Development Act of 1974 and what it amounts to is the federalization of health care in America. It's national health insurance without the benefit program. What it says is that you will no longer have freedom to plan on a local level. We're going to have national bureaucracies, national councils, national agencies, national rules, national regulations, and national guidelines. Of course, for you in the states, it's optional for you, you can follow these regulations, guidelines, etc., or not follow them. The only problem is if you don't follow them by 1980, the way the law is currently written, you lose all federal funding for health care in your state. It is similar to the way states were forced into the Medicaid Program. So unless there's an extension to the law, you will have to comply to the letter with all these federal guidelines.

The national priorities I have referred to talk about increasing primary care services for medically underserved populations, for development of medical group practices, for HMOs and other organized systems, for improving PSROs, for improving prevention, for adoption of uniform accounting and simplified management procedures. The law sets up a structure and requires each state to set up a structure to have a state coordinating council, a state agency itself, and HSAs. These HSAs or health systems agencies, which are your voluntary, so to speak, agencies in your local community, decide where federal health money goes. Also, they make recommendations on Certificates of Need Applications.

Certificate of Need, for the one or two of you who aren't familiar with the term, means a hospital can't add beds, add facilities, remodel, add equipment, add new services without going through an elaborate, time-consuming and expensive procedure of establishing, under regulations, the need for the addition or equipment or whatever else is being sought. The management prerogative, which used to exist in the institution to make that decision is gone. You have to go and fight for the right to do it. Here in Anchorage you may not have as bad a situation as the terrible situation that exists in many other municipalities in many other states.

HSAs not only perform the functions I have mentioned, but they also are entrusted with the authority and power to enforce the national priorities. What most physicians don't realize is that Public Law 93-641, the National Health Resources Planning and Development Act, under which all these Certificates of Need are being reviewed and institutions are being regulated, has total power in the Act to regulate physicians. I have heard a high federal official who was formerly in charge of this program for the federal government say that the ultimate target under 93-641 is the physician in his office setting. There are already states which have adopted laws telling physicians what kind of equipment they can have in their offices. There are provisions in 93-641 where government could actually get into your accounting systems, where they could even get into what kind of specialist can join you and where you should practice. There is a tremendous feeling that specialties are more expansive and add to health care costs, so they want to hold the new doctor supply down to the primary care area. And beds, supposedly the more beds there are the more doctors there are who use them, so if we have fewer beds, doctors won't feel compelled to put people into them.

Much of government activity in health care today under 93-641 is in repressive conduct in the name of cost containment. Up to 1970, we talked about people, we talked about programs, we talked about quality of life, we talked about quality of care, we talked about improving access. That came to a grinding halt. It's as if someone dropped an iron curtain on the Federal Government early in 1970. Don't talk about people, programs, quality at all anymore. Talk about reduction, cost containment, unnecessary care. You don't need chest x-rays anymore when you're admitted to a hospital. There are 28 surgical procedures, says Blue Shield, which are outmoded so we're not going to pay for those anymore. We're going to see the adoption of rules as to whether or not you do an intraocular lens on somebody because they're too old. It is really worthwhile? How much use will they get out of it? Cost containment is the whole con-

cept. And 93-641 is the instrument.

Section 1122 approval was adopted as part of Public Law 93-603, the Medicare/Medicaid Amendments of 1972. 92-603 said that any expenditure for capital purposes by a health institution over $100,000 without approval of a planning agency would result in the denial of reimbursement under the Medicare/Medicaid Program. Now, to know what I mean by denial of reimbursement, you have to understand that those programs aren't like Travelers or Prudential Insurance where the hospital sends a bill and then gets paid its charges. These programs are what are called cost reimbursement. Hospitals are paid their supposed reasonable costs. Regulators, however, have made a fine art of defining what is "reasonable." They have a regulation called the "prudent buyer concept." If they decide you haven't been a prudent shopper and gone out and obtained the lowest price for something in the community, then it's not reasonable and they will deny reimbursement. They have set arbitrary limits under the program for the routine service component of the hospital's charge for bed and board. Arbitrarily, the hospital is put in a class with other hospitals through a weird system, which they've just made weirder by revision a couple of weeks ago, and they say that no matter what your situation is in your community, if your costs for room and board go over a certain dollar amount set for your class of hospital, that's it. You cannot be paid the excess. It's a cap. Government will not share in that cost at all. So, they redefine reasonable cost constantly to reduce what government will pay.

Then the talk about "allowable costs." For example, pediatrics and obstetrics don't affect medicare beneficiaries, obviously, so the regulators will bear any of the costs of those services. Then the regulators talk about cost "related to patient care" and they have a whole slew of things that aren't related to patient care. For example, if you come from a community like this and you don't have a sophisticated speciality available here and the hospital wanted to go out and recruit a physician to come to Anchorage to handle that specialty as the director of that specialty group, even though his primary function is to care for the elderly, they will take the position that the costs of recruiting for that physician has no relationship to patient care; and therefore, they won't bear the cost of that. And it goes on and on and on. The result of it is that under the Medicare Program, most hospitals lose 15 to 20 percent of their costs, not just of their charges. Hospitals receive around 85 percent of their actual out-of-pocket costs under the Medicare Program and under Medicaid, when you combine inpatient and outpatient, hospitals often receive as little as 65 percent of their costs. This is devastating where as much as 55 percent of hospital patients, on the average, (in some hospitals 70 to 90 percent of their patients) are paid for under these so-called reasonable cost programs.

We have the same kind of restrictions under Medicare and under Public Law 95-142, the anti-fraud and abuse amendments of last year. The latter is the government's approach to saying you're all a bunch of crooks.

I was asked to explain what the Federal Health Insurance Benefits Advisory Council is. This is the advisory body to Congress and the Social Security Administration on the administration of the Medicare and Medicaid Programs. I remember representatives of the Bureau of Health Insurance with whom I worked, being called to Capitol Hill in front of the Senate Finance Committee and put on the ropes for all the money "being wasted in the program." There really wasn't enormous money being wasted in the program. Congress had done a rotten job of figuring out what the program was going to cost. They were trying to look for ways of reducing this cost. Of course, you have to understand that for the most part the perspective of Congress is that the whole world is New York, New Jersey, Pennsylvania and Washington, D.C. So the Medicaid mills that they saw there and the corrupt things that went on there colored their perspective on the entire rest of the United States. As far as Congress as an entity is concerned, we still wear buckskin boots out here and drive to work in covered wagons. Well, these regulators used to come back just like they had been put through a wringer and say, "We don't know what they're after. We don't have more than one or two percent of this whole program that's being lost to anything remotely resembling fraud and abuse. They have a fixation on cost and they need a target."

So finally, Congress adopted this broad and vague anti-fraud and abuse act where in effect anything that remotely disagrees with the regulator's interpretation of the complex and elaborate Medicare and Medicaid regulations on how you get paid can be considered fraud or abuse. Hospital representatives can be indicted and charged with a felony for signing the cost report that hospitals have to file every year. I won't go into more detail on it because it's complex, but the primary target is not even the hospital, it's the physician. The government is just beginning to spend millions and millions of dollars to set up special fraud and abuse units in each state to go into a police action.

Government has recently been raiding offices in Los Angeles and we have a big furor

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Tenuate® (IV)
(diethylpropion hydrochloride NF)

Tenuate Dospan®
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence*: Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy*: Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children*: Tenuate is not recommended for use in children under 12 years of age.

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

ADVERSE REACTIONS: *Cardiovascular*: Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System*: Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal*: Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic*: Urticaria, rash, ecchymosis, erythema. *Endocrine*: Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System*: Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous*: A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in midevening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.

OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid resoiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633

Direct Medical Inquiries to.
MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215, U.S.A.

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References: 1. Citations available on request from Medical Research Department, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon [Dillon], R.H., and Leyland, H.M.: A comprehensive review of diethylpropion hydrochloride. In, Central Mechanisms of Anorectic Drugs, S. Garattini and R. Samanin, Ed., New York, Raven Press, 1978, pp. 391-404.

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9-4672 (Y957A)

Overweight may not always be simple... complications can develop.*

Complicated or not...

Tenuate® Dospan® ℂ℣
(diethylpropion hydrochloride NF)
75 mg. controlled-release tablets

A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict appetite control and a successful program of weight reduction may tend to diminish the incidence or severity of the complications in some patients. Diethylpropion hydrochloride has been reported useful in such patients and while it is not suggested that Tenuate itself in any way reduces the complications of overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. **Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.**

In uncomplicated overweight.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

Clinical effectiveness.

The anorectic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.[1] And the unique chemistry of Tenuate provides "...anorectic potency with minimal overt central nervous system or cardiovascular stimulation."[2] Compared with the amphetamines, diethylpropion has minimal potential for abuse.

Tenuate—it makes sense. And it's responsible medicine.

*Studies have shown that obesity is associated with an increased incidence of hypertension, symptomatic heart disease, adult-onset diabetes, and other diseases.

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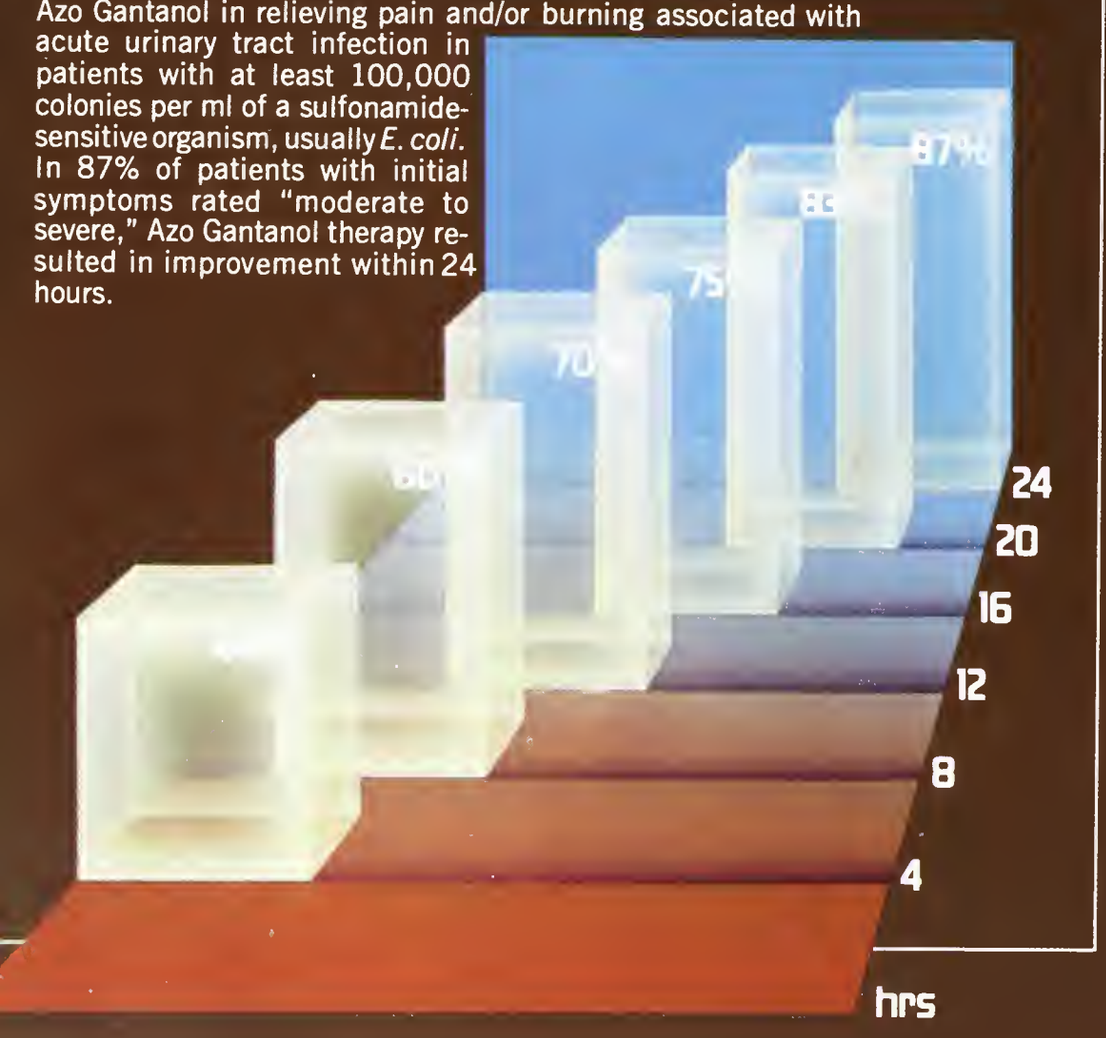
For prescribing information see opposite page.

Important data on the pain of acute cystitis:

In 87% of patients studied [303 of 349], Azo Gantanol® reduced pain and/or burning within 24 hours*

A controlled, multicenter study assessed the efficacy of Azo Gantanol in relieving pain and/or burning associated with acute urinary tract infection in patients with at least 100,000 colonies per ml of a sulfonamide-sensitive organism, usually *E. coli*. In 87% of patients with initial symptoms rated "moderate to severe," Azo Gantanol therapy resulted in improvement within 24 hours.



Before prescribing, please consult complete p uct information, a summary of which follows:

Indications: In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organi (usually *E. coli, Klebsiella-Aerobacter, Staph coccus aureus, Proteus mirabilis,* and, less fr quently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. **Note: fully coordinate *in vitro* sulfonamide sensitivi tests with bacteriologic and clinical response; aminobenzoic acid to follow-up culture media, increasing frequency of resistant organisms li the usefulness of antibacterials including sul fonamides.** Measure sulfonamide blood levels variations may occur; 20 mg/100 ml should b maximum total level.

Contraindications: Children below age 12; sul fonamide hypersensitivity; pregnancy at term a during nursing period; because Azo Gantanol tains phenazopyridine hydrochloride it is contr dicated in glomerulonephritis, severe hepatitis uremia, and pyelonephritis of pregnancy with disturbances.

Warnings: Safety during pregnancy not establi Deaths from hypersensitivity reactions, agranu tosis, aplastic anemia and other blood dyscras have been reported and early clinical signs (so throat, fever, pallor, purpura or jaundice) may dicate serious blood disorders. Frequent CBC a urinalysis with microscopic examination are re ommended during sulfonamide therapy.

Precautions: Use cautiously in patients with im paired renal or hepatic function, severe allergy bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria an stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia leukopenia, hemolytic anemia, purpura, hypop thrombinemia and methemoglobinemia); *allerg reactions* (erythema multiforme, skin eruptions Stevens-Johnson syndrome, epidermal necroly urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, phot sensitization, arthralgia and allergic myocarditi *G.I. reactions* (nausea, emesis, abdominal pain hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripher neuritis, mental depression, convulsions, ataxi hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxi nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, di uretics (acetazolamide, thiazides) and oral hypo glycemic agents, sulfonamides have caused rar instances of goiter production, diuresis and hyp glycemia. Cross-sensitivity with these agents m exist.

Dosage: Azo Gantanol is intended for the acute painful phase of urinary tract infections. *Usual adult dosage:* 2 Gm (4 tabs) initially, then 1 Gm (2 tabs) B.I.D. for up to 3 days. If pain persists causes other than infection should be sought. After relief of pain has been obtained, continue treatment with Gantanol (sulfamethoxazole) ma be considered.

NOTE: Patients should be told that the orange dye (phenazopyridine HCl) will color the urine.

Supplied: Tablets, red, film-coated, each conta ing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.

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Fast pain relief plus effective antibacterial action

Azo Gantanol®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.

for the pain **for the pathogens**

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey 07110.

there. They have raided accountants' and attornies' offices. They raided a distinguished law firm's office and before they could get out, while they were searching all their files for six hours, the law firm went to court and got a restraining order so the government could not remove from the law office any of the files that they had searched in violation of the Constitution. The judge absolutely tore the State Attorney General to ribbons for the crude raid and search. Now we have a battle going on with the Attorney General saying, "I'm not going to let all those crooks hide behind their lawyer's files." The Attorney General was after a physician who was represented by the particular law firm. The Anti-Fraud and Abuse Act is representative of part of the mentality we are dealing with now at the governmental level.

Preventive health care: We used to demand that when you admitted a patient to the hospital, you did a complete work-up on the patient. It was the only shot you had at many people to do some preventive health care. It was encouraged. It was pushed. Now, it costs too much. That stuff's unnecessary. Let's not do it anymore. The doctor must write a specific order for anything that's going to be done.

Anti-trust law: Who in the world ever heard of anti-trust having anything to do with the health care field? Now, Public Law 93-641 says that we want everybody to work together, to have shared services, coordinate, plan together, and so forth. The anti-trust division says we're not so sure that 93-641 exempts you from the restrictions against conspiracy, combining to monopolize, price fixing, freezing people out, and so on. So, the Federal Trade Commission has doubled its enforcement budget in the health care field; it is out to get physicians first, and second, hospitals. If a hospital has an Emergency Room where you have a rotating panel and you don't give equal call to the ear, nose and throat man with the plastic surgeon on plastic surgery cases, that could be a violation. The Federal Trade Commission may act, comes out to do a whole investigation, drag your records back. If an HMO wants to do business with your hospital and you don't enter into a contact with them for beds, that's possibly a restraint of trade and may start an investigation. If a hospital starts a shared services organization and takes certain institutions in but does not take in others, they might start an anti-trust investigation against the hospital.

State rate review and rate setting: There are at least 25 states that have either rate review or rate setting. Nine of those states are mandatory, meaning they go through the hospital's budget line item by line item and tell it what it can spend and what it can't spend. What it will be allowed to charge for its services in the next year. Some states are worse than others. In New York State last year, on the average, 80 percent of the hospitals lost a million dollars each; 23 hospitals went bankrupt in the last three years in the State of New York. The New York State Hospital Association states over 25 percent of the cost of health care in the hospitals of New York is represented by governmental regulatory paperwork, and these rate-setting agencies increase it. These rate-setting agencies have the same type of rules as Medicaid about only being allowed to charge patients for things that are patient-care related. We have a hospital client (I like to use this illustration because I think it's so inane) which built a parking structure for patients and employees of the hospital. The rate-setting commission said that to amortize the several million dollar cost of the structure, the hospital could include nothing in its rates because parking structures are unrelated to patient care. Rate-setting agencies in some states are putting lids on the amount of total revenue a hospital can have. The states are toppling one by one going to type of rate setting.

Financial disclosure rules exist in many states now that are requiring publication of all hospital rates or costs or revenues. This information on revenues is distorted in its use and is put out by people who have the wrong perspective. They don't relate it to your costs. They don't tell what is being done with the surpluses to enhance patient care. The information is being used as a tool to frighten health care providers into a lower-rate structure. It is not creating a group of informed consumers as was the original concept.

Philanthropy always has been a major course for the nonprofit community hospital in their capital improvement programs, and to some extent, in their operating programs. But although the dollars in philanthropy have been going up, they have not been going up at the same rate as inflation, and at a time when our revenues are less because of these governmental pressures and cost containment, where we need more philanthropy in terms of absolute dollars, we have less. Not only do we have less, but we have situations such as in the State of Massachusetts right now where the Massachusetts' rate-setting commission in finalizing its definitions of reasonable financial requirements for a reimbursable cost base, proposed to include all gift income in the revenue based as reimbursement for services. These are services traditionally paid for by third parties or patients directly, which means that instead of allowing you next year to charge a dollar or two more, or whatever

is necessary in your rate to make up your cost increase the prior year, they're going to say you don't need to do that because you've got all this revenue coming in from philanthropy. Well, if you were a donor, what would your reaction be if you knew that the money you were paying was in essence a gift indirectly to the Medicare/ Medicaid Program because it reduced the amount the State has to give you? We are battling that kind of thing, but it's going on in different rate-setting states now and confiscation of philanthropic funds is something that we're all struggling to avoid. We have federal legislation pending now that might help us avoid this problem in the future but its passage is at least in doubt.

Federal cost containment is different from state rate setting. It says in bills before Congress right now, that if there is a state rate-setting program in existence in your state that is at least as stringent as the proposed federal law, then you're exempt from such federal law. But if you don't have one, and you don't here in Alaska, then the federal law will apply. That cost-containment program will set a cap on the total revenues of the institution. Here's where rationing of health care comes in. If you grossed in your institution 30 million dollars last year, then the federal cost-containment proposals would use that amount as a base amount. It would then be adjusted for inflation and next year you might be able to take in $40 million in revenues. Let's say that the current trend of less serious hospitalizations, and more intensive hospitalizations continues because you have more ambulatory care, most outpatient surgery, and that the length of stay of more intensively ill people is going up. Open heart surgery programs are costing more dollars per patient, so is radiation therapy and so are a lot of the other major procedures that are being done. Hospitals more and more are becoming places for the more intensely and acutely ill. If you take care of these people even in the small numbers, the annual cost of taking care of them will be more. Your revenues may go to $50 million or $60 million, not because you're wasteful, but because you're taking care of less tonsils and appendix and more open heart surgeries and so forth. The government says, "We don't care about that. That's up to you. You can either do open heart surgeries or you can take care of the less ill, or you can mix it up anyway you want, but you ration the health care. We're not going to ration it. We're just going to put a cap on it."

Consumerism: People, on the other hand, want more access. They want better care. They want open involvement in health care matters and those pressures are causing great psychological problems in the adjustments of hospitals and physicians to the involvement of the community.

The American Institute of Certified Public Accountants' standards are very complex and have a direct involvement in how hospitals get paid. The way accountants report to third party payment agencies has a great impact on how much hospitals are paid. Accounting reporting standards through federal pressures are becoming more and more restrictive so that it becomes more and more difficult to hold on to your incoming revenues.

The tax laws, like the anti-trust laws, are working in direct opposition to Public Law 93-641. 93-641 wants you to share. The tax laws say that if you share under certain circumstances you'll lose your nonprofit tax exemption. You can't easily share laundries, for example, there's too strong a laundry lobby. So if you make any money on the use of your laundry, that money will be taxed by the Federal Government. You get a reduction in your Medicare reimbursement from income from shared services programs. The various federal agencies are not integrated at all in these areas.

PSRO: These are Professional Standards Review Organizations of, for and by physicians. Physicians are asked to police their own practices by conducting peer review. But government is reducing the funding to these agencies and they are becoming more restrictive in terms of what they are going to require you to review. How long your stays are going to be? The whole idea is, of course, to restrict inpatient occupancy and length of stay and it's a complex mechanism to deal with. You don't know whether to support your PSRO and take control of it and try to get it to be reasonable, or whether to stay away from it. Is the hospital better off to have delegated status, where you do your own review, when the money is running out or should you withdraw from delegated status and let the PSRO do the review on its own, if it can find the money to pay for it? These are problems that many physicians and hospitals are facing.

The pressures of unions are not only in terms of payment for health care costs but also in terms of demands upon providers for wages. There is a hospital, for example, in Oakland right now that is experiencing great union difficulty.

Inflation is beyond the control of the hospital institution in all of these areas: supplies, equipment, food, labor yet cost caps are being placed only on the hospital not on anybody that supplies the hospital.

Malpractice: None of you here in Alaska have to be told about the cost of malpractice

insurance, of the cost of the awards, of the trauma it has created in the health delivery system and the need for reforms in the malpractice arena.

And finally we get to HMO, Health Maintenance Organizations—the government's promised land. I'm not going to get into a philosophical discussion of HMOs. They are just like everything else, varied and different from place to place. People can argue that they do a fine job, can argue that they don't do a good job. People argue fee for service medicine is an incentive to hospitalize. People argue that HMOs are incentives not to hospitalize, and that people who need care are not given care in order to keep premium costs down in HMOs. The fact of the matter is though, HMOs are increasing by leaps and bounds. Twenty-three percent in the last year. More funding is going on. The HMO amendments of two years ago have made them much more viable. They are having significant impact on inpatient occupancy in communities. When a HMO, which operates as a perpaid plan, comes in and takes on a whole segment of the community, it has effectively removed from the hospital and private practice physicians an entire portion of the population which the hospital was originally built to serve. Unless the hospital starts its own HMO or contracts with the HMO for beds.

I believe all of these pressures are going to break health care institutions down into what I call the leaders and the led. Those who are adroit like Providence-Anchorage, far-thinking and exercising leadership, will be the survivors. Such hospitals are going to be within the endangered species that's going to stick around. And the same thing holds with the physicians. Those physicians who understand who the real adversary is will be among the survivors.

It's not the hospital administrator, not the board of trustees, not the advisory board, not the medical society nor the organized medical staff. All of these are in this together. Doctors are clearly in this with hospitals. If the public only knew the truth, if we only had the kind of public relations access that the government officials have, if we could tell the story of what is happening, the public would be on our side, too. The public doesn't want to see our present health care system destroyed. They don't understand the facts, however. They only see that health care costs them more money. And so we have to cope with public pressure, too.

We in health care must act together. We've got to pull together. We've got to be proactive not reactive. We must take action in the health care field as a group against all these diverse interest which threaten our present system. We should no longer let these programs that have failed year after year be repealed and re-enacted with another name. We can't allow government to make us decide who shall live and who shall die. Government is going to have to face these issues. We're going to have to find other sources of funding to care for people. Philanthropy or other sources of funding will be necessary to see that all people can take advantage of new technology and drugs and procedures. People have a right to live in dignity.

We must pool our strengths. We must develop a data base from which we can act because all of the legislative bodies respond to data. We have to have articulate spokespersons on all of these federal and state committees and councils. We have to affirmatively prepare and present more sensible legislation to the state legislators and to the federal legislators. You should look to the experience of others who have formed political action groups—State Hospital Associations, medical staffs forming their own political action committees. You might be astonished what one human being can do by going to the state capitol and persevering. For it isn't out of our hands. And it isn't a wholely pessimistic situation.

Many in government have had their fill of over-regulation. We have a very strong anti-regulatory sentiment in Congress and most state legislatures. They're fed up with the bureaucrats who administer the laws and who decide that they mean something other than what Congress meant and then pass all these regulations that operate in unintended ways. It's a good time now to get in there and do something effective.

I think everybody has had the shoe pinch hard enough now to know that we're all in this together. It's just not a lot of scare talk. What I've described is really happening and it can get even worse.

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Medical Insurance Exchange of California

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GAHP—PRIMROSE PATH OR LAND OF MILK AND HONEY?

Winthrop Fish, M.D.

Lurking under seeming semi-clandestine cover, an organization called Greater Anchorage Health Plan has been smoldering along for several years in abject poverty. It is now fanned into flames by our friend, HEW, or, rather, our tax dollar.

Originally it was conceived to assist a local clinic, now defunct, corral a far larger share of the Anchorage public than the sole labor union they had monopolistically cornered for medical care. This seems a perfectly plausible ambition under the circumstances because, unfortunately, the very feasibility study required to get federal grant money ironically disclosed the fundamental financial instability which would lead the clinic into the disruption now documented by history. GAHP, without a clinic, remained a paper organization with a Board of Directors. But no longer!

With the federal push for prepaid IPA's and HMO's came the promise of megabuck support, a breath of life. GAHP, invigorated, is coming out of the closet. Circumstances, though, are different: originally it had a clinic readily available for medical care but no money; it now has money but no clinic.

To fully understand, and for genuine entertainment as well, the reader should peruse the GAHP grant application. Although the GAHP board members seem truly well intentioned, they appear to derive their sophistication about the realities of medical practice and economics primarily from convenient HEW consultants. These kind gentlemen helpfully compiled the grant application which is designed supposedly to justify a $200,000 planning and a $2.5 or so million federal operational grant. Since Anchorage is one of 60 U.S. cities targeted by the Feds as ripe for active HMO promotion and support funding, the current application is probably window dressing. Nevertheless, it is ideally suited to convince and cajole naive business, labor and government communities, and doctors, in Anchorage. The premises: that the public deserves a now denied choice of health care systems. And, that for less money, GAHP can provide business, labor and government a wider range of better medical services, even after extracting a million dollars a year for administrative cost. Or from another point of view, the hospitals will continue to prosper just as before, the doctors' incomes will continue, we add a million-dollar administrative payroll to the Anchorage economy, the public gets better medical care and it all costs less, not more. It's hard to ignore a deal like that!

At first glance it might seem ridiculous or even tantamount to fraud. But we reckon without HEW and the IRS. HEW is there to ensure that GAHP can't go broke until it is in full swing; IRS is to make sure it gets started in the first place.

HEW, through Region X, will be providing the 2.5 or so million dollars in support "start-up" funds over the course of some five years, presumably as a loan to be repaid once operational. That makes it a whole new ballgame. It is also the carrot. The stick is the IRS. When the employers and employees learn they cannot deduct health insurance premiums unless they offer a choice of plans and take the cheapest package, and when a tax-subsidized HMO surprisingly turns up to be the cheapest, it will be an offer very hard to refuse. That sets up the

Winthrop Fish, M.D., 3300 Providence Dr., Anchorage, Alaska 99504.

The Maker

Examining a Few Myths About Prescribing.

Increasing pressure is being put on the practicing physician to prescribe drugs generically. You are told that brand-name products are universally "expensive" and generic versions are relatively "cheap." To make this case, the most extreme (rather than typical) price differentials are cited. Thus, consumers are led to believe that such differentials are commonplace. Even your knowledge and your motives as a physician are questioned.

Understandably, these views have created myths. We think it's time to examine them in the light of all the facts and ramifications.

MYTH: There are no differences in quality and performance between brand-name products and their generic counterparts. The corollary is that there are no differences among products made by high-technology, quality-conscious, research-based companies and those made by commodity-type suppliers.

FACT: The Food and Drug Administration does a good job in monitoring a generally excellent drug supply. Still, it has nowhere near the resources to guarantee the quality and bioavailability of all marketed products at any given time. Just a few months ago, for example, it noted that batches of tetracycline HCl capsules which met official monograph requirements were not bioequivalent to a reference product. As you know, there is substantial literature on this subject affecting many drugs, including such antibiotics as tetracycline and erythromycin. The record on drug recalls and court actions affirms strongly that there are differences among pharmaceutical companies and their products. Research-intensive companies have far better records than those that do no research and may practice minimum quality assurance.

MYTH: Industry favors only "expensive" brand names and denigrates all generics.

FACT: PMA companies make 90 to 95 percent of the drug supply, including, therefore, most of the generics. Drug nomenclature is not the important point; it's the competence of the manufacturer and the integrity of the product that count.

Matters.

MYTH: Generic options almost always exist.

FACT: About 55 percent of prescription drug expenditure is for single-source drugs. This means, of course, that for only 45 percent of such expenditure, is a generic prescribing option available.

MYTH: Generic prescriptions are filled with inexpensive generics, thus saving consumers large sums of money.

FACT: Market data show that you invariably prescribe—and pharmacists dispense—both brand and generically labeled products from known and trusted sources, in the best interest of patients. In most cases the patient receives a proven brand product. Savings from voluntary or mandated generic prescribing are grossly exaggerated.

MYTH: Drugs account for a major portion of the rise in health care costs.

FACT: Drugs represent a very small part of such costs. The amount of the health care dollar spent for prescription drugs was about 12 cents in 1967; today it is about 8 cents. And you as a physician are most conscious of how drug therapy can cut hospitalization, avert surgery, reduce office visits and keep patients on the job.

MYTH: Government intrusions into the marketplace will save tax money.

FACT: Government schemes always cost the taxpayer something, and the costs often exceed the benefits. Certainly, any federal "help," such as lists of wholesale drug prices sent to all physicians and pharmacists, will be no exception. Just think of the expense of keeping them current! Moreover, wholesale prices are poor guides to actual transaction prices and even worse guides to retail prices.

The PMA Position

We believe your freedom to prescribe, either by generic or brand name, should be totally unabridged. Otherwise, your prescribing prerogatives and your relationships with patients will be seriously impaired.

The maker does matter

After the myths about price and equivalency have been shattered, one fact stands out more clearly than ever: *The maker does matter.* As always, your best guide to drug therapy for your patients is to select products—both brands and generics—from manufacturers with credentials and performance records you have come to respect.

PMA

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

scenario. How will it work?

GAHP will be somewhat different than the usual models. It is not an HMO or an IPA. It is both. The doctors won't be in the HMO; they will be in the IPA. The HMO is really more of an administrative organization—with a medical director of course—to negotiate and market the health plan with various unions and businesses, and probably medicare and medicaid. It will also negotiate with the doctors in the IPA for medical care and with other institutions for hospital and other health care, and broker out the available dollar to all concerned. If it occurs to the reader that a bit of conflict and acrimony might develop between the IPA and the rest regarding their share of the financial pie, rest assured. Remember, it will be arbitrated fairly by the HMO, or GAHP. Anyway, the doctors will always be able to charge their usual fee for service, as long as it is not more than a prior agreed-upon fee schedule,[1] and 15% is held back for reserve, and the IPA does not run out of money. Since the whole plan would falter badly if the IPA ran out of money, the HEW sweetener will be there to prevent that, at least for a couple of years or so or until the docs are locked in. By that time the medical director will be making $90,000+ 25% fringes and the GAHP administration will be $1.5 million. That is up front. It does not appear that the administration itself will keep 15% in reserve. So the IPA can expect absolute fairness dealing with the GAHP for what's left. And so far we haven't mentioned the administrative cost of the IPA.

The IPA has to have an administration too, to negotiate with GAHP for money, but also to see that quality control is assured and overutilization minimized, by hospital preauthorization and practice monitoring and things like that. Some unscrupulous docs might divine the truth: that there was only so much money in the pie and the game plan was to get as much as possible. The docs who make their money in the hospital would hospitalize as hard as they could. That would be fine for the hospitals but then the hospital costs would rob the IPA and the docs who don't hospitalize. The IPA would have committees, of course, to restrain hospitalization and to see that it all worked out fairly, and a friendly, comfortable, cost-conscious atmosphere would naturally prevail, at least until the HEW money ran out. One nice feature should appeal to everybody. The IPA books would have to be open to the membership. Then everyone could take a peek now and then to see how the other fellows were doing.

A real sleeper is the assumption that GAHP will save a bundle through the use of physician extender types. If that doesn't bring you bolt-upright out of your chair, it should. Those souls, who justify the exploitation of their helpmates for fun and profit in the pious name of public service, will find their helpmates have run off with the store. If GAHP intends to save on "mid-level health care," it clearly intends to pay less for it, eventually be assured, no matter who provides it, whatever it is.[2,3] In an open system, ho hum. Caveat emptor. But in a closed system like GAHP? It takes no seer to visualize the potential mess.

Another nagging little problem that might bother some of you is that HEW $2.5 million. Purportedly, it's a "loan" to be repaid to HEW, but it is destined to be spent during the early lean years for administration and marketing, etc., and to keep GAHP from going broke. If so, how does it reappear? By then the people will be getting better and cheaper medical care from fat and happy providers while the GAHP and IPA administrations expand in true bureaucratic form; and somehow we have a spare $2.5 million to boot. An unthinkable alternative is the lurking suspicion that just maybe nobody really expects to pay it back, that's its bait. Either way it nags.

In fairness, of course, GAHP would eliminate the present third-party administrative costs, and this, on balance may even out financially. But third parties do not now demand us to "share the risk" for actuarial blunders over which we have no recourse or control or for greedy colleagues who plunder the pot. The idea that physicians should share the risk is dandy politics and has immense appeal for those paying the bills; and no one should argue that physicians should not share the risk if they really want to. It is just very hard to imagine why any, in his right mind, would.

Another concession is that in reality we may have only a Hobson's Choice. Virtually all Washington's directions are convergent upon the very same practice controls and reimbursement mechanisms embodied in any federally approved prepaid health plan. This explains very well the federal enthusiasm for throwing money down the drain, funding HMO's and IPA's. Each is,

1. This sounds like a maximal allowable fee schedule to me, but I'm told it isn't really that at all.

2. Actually only PA's practice mid-level health care. Doctors don't. ANP's don't either. They "perform an expanded role in the delivery of health care," which means "to provide health care to the consumers through the identification, management and/or referral of the consumers' health problems, and to maintain the consumer's health by means of preventive and promotive health care actions." Luckily, the Nursing Board regulates this.

3. None other than the AAPA Prexy just informed the State Medical Board of his intention to practice mid-level pediatric health care in the Alaska Hospital.

essentially, a microcosm of NHI.[4] If they can be pinchgrafted all over the country, with coalescence the deed is done. And if you don't join?

Well then, Washington intends to maintain the fiction of private health insurance to avoid dismantling the industry while in fact effectively subsidizing and nationalizing it. The industry would be in essence a puppet, rubberstamping in identical detail the same federally proscribed medical practice controls and payment mechanisms. One must wonder if this whole sham is not a sop to the industry in return for its pusillanimous support of mandatory hospital cost containment. The industry would in effect be a branch of government. These universal controls will inevitably fall on all federally funded medical care systems, including, of course, our own GAHP. The problem we face? How easy for the Feds do we want to make it? For the Feds may not win the same battle so easily on Capitol Hill.

No discussion of this subject should end without at least a mention of one traditional attraction: the pleasant spectacle of the in-docs busily trying to monopolize the town while the out-docs wistfully watch their hard-won practices stolen away. It leads to a brisk trade in records-release forms and to warm friendships. Surely life holds few greater joys than an unexcepted encounter with a longstanding but embarrassed friend and patient wearing an IPA hospital wristband. Since we have already been through that once in Anchorage and since it was notably successful, it should be much easier to get in the swing of it again.

In any event, GAHP has a minor problem at present: the IPA doesn't exist. Or I don't think it does. But when the docs in town learn of the fun-filled times ahead, there should be some scurrying to get in on the ground floor. It should be interesting to watch.

4. If you think otherwise, consider! Prepaid, 1st dollar 100% coverage; fee schedules; internal practice controls and monitoring; top-heavy administration; unified funding; involuntary contributions. Do you need more?

PRESIDENT'S PAGE

In July I had my first opportunity to attend the American Medical Association House of Delegates meeting in Chicago. This is now strictly a business meeting with scientific sessions being held on other dates. Chicago would seem to be a less-than-ideal location in summer, but the volume of material covered and the pace of activities preclude leaving the hotel meeting rooms except on a few evening occasions.

At this meeting I accompanied Joe Ribar, the ASMA Delegate, and J. Ray Langdon, the Alternate Delegate. Although we only have one vote on the floor of the House of Delegates, it is beneficial to the ASMA to have three members in attendance. Much debate and information exchange occurs at caucuses and Reference Committee meetings which may occur simultaneously at different locations. It would be impossible for one person to cover.

As you can tell from recent American Medical News, there are a wide variety of positions on any medical political issue across the country. It is my observation that the format of the Annual Meeting is an effective method of both arriving at a consensus and making the elected leadership aware of the variety of opinions and wishes of the national membership.

The elected leadership impressed me as being concerned and well versed in the many topics under discussion. The backup provided by the AMA professional staff appeared to be good and our lobby in Washington is reported to be effective and well respected.

The AMA is facing a membership problem and potential crisis. It is estimated in 1979 that only one-third of the physicians eligible in the United States will be members. This diminishes the effectiveness of the M.D.'s lobby both financially and in terms of representation. It also means that two-thirds of the doctors in the country are taking a "free ride." I am familiar with the argument that "the medical association doesn't represent me or my views." It is logical that all views may not be represented simultaneously, but in an arena of discussion and debate the reason of a "minority," "radical," "unpopular" or "inflammatory" argument can greatly modify the end product or adopted consensus. It would also seem logical that "dropping out" or "not joining" would be a futile way to have a particular viewpoint or opinion recognized and incorporated.

Douglas G. Smith, M.D.

In Alaska 70% of private practicing physicians belong to ASMA and of these 82% are AMA members. We are doing better than the national average, but we still have room for improvement.

In reading over this letter, it much resembles an AMA pep talk. I do not apologize for that. I saw the organization in action and was impressed. If we are to have any voice in the future direction of American medical care, we must make our collective voices heard through organized medicine. The AMA is our current vehicle nationally and deserves our support.

A recent article by AMA Immediate Past President, Tom Nesbitt, M.D., is reprinted in this issue. I urge your perusal for consideration of its thoughtfulness and also pertinence as we begin to assess the role of the State Medical Board in the near future.

CLEAR AND HIDDEN DANGERS*

Tom E. Nesbitt, M.D.

The man we memorialize tonight—Dr. Walter L. Bierring—was for many years a personification of our profession—and our professional*ism*. His forward-spirited achievements as a medical executive, teacher, and practitioner were exemplary of medical development in our land. And that development—that steady conquest of new horizons in patient care and public health—have been the very essence of American medicine.

Today the *de*velopment could be endangered by federal *en*velopment, in the form of specific legislation. Some federal laws—passed and proposed—seem to ignore the truth that medicine, to a marked degree, is a creative art and a personalized expression—like the works of a good portrait painter. Enactment of this kind of legislation can force us physicians to paint by the numbers. To us, America's health services as a whole must be considered first from the standpoint of *each* of its parts, and *each* patient's needs. Accordingly, we should do all we can to modify the thinking of those federal officials who see the services merely as a socio-economic *sum* of their parts, and the patient simply as an abstract unit. Such a view is bound to be a threat to the form of health-care delivery that Americans want and need.

I would be oversimplifying and falsifying, however, if I laid all of the dangers at the desks of our national government. It is convenient to do so, of course. It is easier to rally physicians as a single force if we can point to a single adversary. But some serious dangers are lurking on our own turf—yours and mine—as I shall illustrate in the course of my remarks. We are the people who can best know and initiate what needs to be done in health-care delivery, and we must set examples of responsible action, if we expect the federal government to act responsibly toward us.

In addition to sounding a note of caution against oversimplifying the sources of danger, I want to warn against oversimplifying the potential threats that *are* indeed federal. There is a tendency to see a hazard only in those charismatic plans and actions that arouse the most controversy and publicity. Proposals for a heavily federalized version of National Health Insurance and for arbitrary cost controls on hospitals are prime examples. And certainly they are highly significant ones. But a maze of legislation already on the books has a potential for far-reaching federal controls.

One piece of such legislation is the National Health Planning and Resources Development Act of 1974 which is up for renewal this year. HEW is pulling punches on its implementation, partly to keep it from preempting President Carter's special bill as a vehicle for hospital cost containment. The fact remains, however, that the planning act reposes enormous power in HEW.

Another law with far-reaching potential was signed just a half year ago, and it is truly a sleeper. I refer to the Health Services Research, Statistics, and Technology Act. I can readily see why newspaper columnists and other pundits would rather discuss National Health Insurance for the umpteenth time than plod through the somewhat mystifying provisions of this new law. But for us in the medical world—you and me alike—a knowledge of this law is likely to be made increasingly essential. Originally conceived as a blow at so-called unnecessary surgery, the law could have a sweeping general effect on medical research, technology, diagnosis, and

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*The 24th Annual Walter L. Bierring Lecture was delivered at the annual dinner, Federation of State Medical Boards of the United States, Washington, D.C., May 11, 1979.

Dr. Nesbitt is the 133rd president of the American Medical Association.

Reprint from: American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

AMA Establishes a Section on Medical Schools

A Section on Medical Schools was added to the AMA structure by the House of Delegates at the Clinical Convention in December 1976. This new section gives AMA members who are medical school administrators or faculty a direct means of participation in AMA activities. The section will have a delegate in the House at the 1977 Annual Convention. Membership in the new section will include the dean of each approved medical school and three members appointed by the dean from the administration and faculty. All must be active members of the AMA. An alternative membership selection method is provided in case a school's dean is not an active member of the AMA.

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Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

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therapy, both today and tomorrow. The bull's eye of its diversified target is health-care costs. And like other federal legislation, it views patient *care* in the context of *cost*, whereas we physicians necessarily view *cost* in the context of *care*.

To help the Secretary of HEW hit the target and the bull's eye, the law typically calls for new layers of officialdom. Thus there is to be a National Center for Health Care Technology in HEW, and an advisory National Council for such technology, whose eighteen appointed members are to include only two physicians. Acting through the Center, the HEW Secretary is to make grants and contracts for assessing present and future technology on the basis of such factors as "effectiveness," "cost effectiveness," and "social, ethical, and economic impact." Also, he is to set technological priorities on the basis of such criteria as "cost" and "rate of use."

Now here's the clincher: The law defines technology—and, believe me, it's not restricted to what people generally infer from that term. It's defined as "any discrete and identifiable regimen or modality used to diagnose and treat illness, prevent disease, maintain patient well-being, or facilitate the provision of health services." In other words, everything in formal health care. Carrying the law to its authorized and possible conclusions, we can see care being reduced to the premise that what's best economically for the most people is the best medically. We can see norms, or averages, of care being developed on that premise and being applied not only to the use of sophisticated apparatus but to such things as the location of a graft for a coronary bypass and the length of a visit to a psychiatrist. We can see the norms become standards for Medicare-Medicaid payments—then for private insurance payments—and also for determination of professional-liability risks, without any allowances for special cases and for the judgment of physician and patient.

HEW's concepts of proper and improper care could affect medical research and discourage or hamper much of it. Sooner or later they could also be reflected in medical education and consequently, mind you, in the licensure of physicians. In a word, this sleeping giant of a law could play havoc with our sense of professional values and our spirit of public service.

But while I am apprehensive of the norms of care—the rigid *common denominators*—that could emanate from the federal hierarchy, I am also apprehensive of any such common denominators at the state level. Let me say, emphatically, that the likelihood of these is inherent wherever Continuing Medical Education is *required* for relicensure. Twenty-four states now have compulsory CME laws, and eighteen of the twenty-four are implementing them. When there is learning simply to meet legal requirements, it is easy for these requirements to govern the content of the learning. They could also have an impact on undergraduate and graduate medical education and on original licensure.

Now the American Medical Association—and I—are staunch supporters of *voluntary* Continuing Medical Education. Last year the Association sponsored 393 CME courses, and it has increasingly regionalized them, to make them more convenient to the busy physician. Voluntary CME can be a source of strength and stimulation to the practitioner in exercising his knowledge, skills, and judgment in a cost-effective manner. In contrast, the compulsory approach can have an inhibiting effect on medicine, both as a science and as an art. It can substitute painting by the numbers for painting according to what is seen and found in the individual patient. It can easily antagonize and "turn off" physicians instead of attracting them, the way the voluntary approach does. Mandated CME may also entail more costs than the knowledge gained from it justifies—costs that eventually must be borne by the public.

I appreciate the good intentions that went into the drive for compulsion. Its champions in medicine have seen it as a safeguard against colleagues who have let their knowledge, their skills, and perhaps their very selves become impaired. Among other things, the drive for statutory compulsion has been seen as good public relations. But I doubt that much of the public regards it as an assurance of proper care. High-quality care begins with the individual physician and his or her incentives. It cannot be legislated. So it seems to me that compulsory CME resembles many of the nostrums conceived in Washington, D.C. in that as a remedy it is timely, convenient, forceful—and probably wrong. I think it is high time to re-examine the rationales for the compulsory approach in terms of recertification as well as relicensure, and to assess its effects on the quality of CME and on patient care.

In arguing that law cannot create *proper* care, I do not mean to belittle its usefulness against the impaired physicians who give *improper* care. Some thirty states have impaired-physician laws, a number of which are in harmony with an AMA model bill. Yet various media have carried a rash of lurid stories about wayward physicians in their midst, even in states with adequate impairment legislation. Such stories can cause consumers to have doubts about the whole medical profession, and perhaps their own care. What can be done to get at the

roots of the problem? A major answer lies in enabling state medical boards to have enough funds to carry out the law, including enough investigators and prosecutors. One duty of every one of your state boards is promptly to apprise your Federation of disciplinary actions taken in your state, so that boards of other states can be informed. A number of states are *not* apprising the Federation, with the result that a physician faced with a penalty can easily set up practice elsewhere without any colleagues or patients in the new location being aware of his record of misconduct.

There is no reason for state boards to be apprehensive about disclosure. Virtually all states have laws protecting them against libel or slander suits brought by a wayward physician. In addition, most states have laws protecting peer review panels and individual physicians who report instances of wrongdoing to the boards. Many states even require such reporting, in conformity with an AMA model bill.

However, such legislation must have a life far beyond the pages on which it is printed, and the good intentions with which it was enacted. It must be a wellspring for action, rather than a disguise for *in*action. Action that manifests the best that is in us is needed in *all* aspects of medicine, because the aspects are interdependent. Medical practice is extremely ramified today, with many wires and many hookups. But all those wires and hookups rely on one circuit, and that is our professionalism.

What is professionalism? I think it can be defined as a special spirit of service derived from the common knowledge, skills, and dedication of those who practice it. As such it is an important consideration in the three specific issues that I have reviewed.

It is professional to encourage—and expect—physicians to seek Continuing Medical Education voluntarily.

It is professional to weed out those physicians whose misconduct flouts professionalism.

And it is in the cause of professionalism that we must be on our guard against those federal actions that would take the warmth of human care and put it in the chill of impersonal, abstract control.

In the times ahead, our tradition of professionalism is something that all of us in medicine must uphold. And more than that, my friends, it is the key to upholding all of medicine.

Childhood Diseases Succumb to Vaccines

Shots Halt Child Ills

Vaccines are now available against a variety of infectious diseases. Most youngsters are started on their preventive medicine route at around two months of age with immunizations against four different childhood diseases.

Diphtheria, tetanus and pertussis (whooping cough), known as DPT, is given in one dose combining all three at age two months up to the seventh birthday, says an immunization pamphlet from the American Medical Association. Usually three doses are administered, at age 2, 4 and 6 months, with a fourth dose at 18 months. Booster doses are recommended for children at 4 to 6 years, with one DPT injection before entering school. Adults should have tetanus and diphtheria boosters every 10 years.

DPT vaccine has been used since the early 1950s, and is highly effective. Diphtheria is still a threat to the unvaccinated, and can result in paralysis, heart failure or death. Whooping cough continues to occur in the unvaccinated, especially infants less than a year old. Untreated, it can cause brain damage.

A person without tetanus immunization can become seriously ill if the spores get into a puncture wound. Physicians recommend booster shots every ten years throughout the life span.

The Sabin oral vaccine against polio is administered by mouth on a lump of sugar or in sweet liquid. It is given in two doses, at 2 and 4 months of age, with another dose at 18 months and a booster before entry to school. Adults subject to unusual risk of polio should receive two doses of Sabin oral vaccine 6 to 8 weeks apart, followed by a third dose in eight to 12 months. Routine immunization of adults in the United States is not recommended.

March, 1979

Frank Chappell
Science News Editor
AMA

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..in the functional bowel/irritable bowel syndrome*

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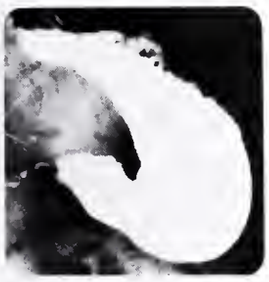
helps control abnormal motor activity with minimal anticholinergic side effects†

Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.

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"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med 5:356-358, 1964

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BOOK REVIEW

Kent R. Autor*

Ian Currie: **You Cannot Die**, Methuen Publications, New York, Toronto, London, Sidney, (1978), hardbound, 288 pages, $9.95.

This book presents to the general public, an accumulation of persuasive evidence, supporting the hypothesis of reincarnation.

Ian Currie is a professor in the Department of Sociology and Anthropology at Guelph University in Toronto. He is a thanatologist.

This is **not** a scientific publication. The author presents an array of evidence carefully and systematically, leading the reader through documentations of every known manifestation of astral existence: ghosts, hauntings, visions of the dying and of the dead who have been resuscitated, out-of-body experiences, regressions under hypnosis into past lives, possession, psychic phenomena, and communications with the dead through mediums and psychics.

With this subject, it helps if the methods of enquiry are credible. Professor Currie's own method is reportorial and inferential and must be judged in these terms. He limits his reports to the reasonably "hard" data accumulated during the past century by the Society for Physicial Research, the work of established parapsychologists at North Carolina, Virginia, and the Stanford Research Institute as well as others who have provided good documentation and corroboration for their investigations or reports.

The first and most basic question regarding the occult is whether there is a disembodied spiritual existence. The entire content of this book would support that conclusion.

Chapters one and two present the first level of evidence, predominantly anecdotal, and deal with apparitions, their characteristics, and the conditions under which they appear and communicate. One case is reported in which nine people, collectively and individually, observed the visible spirit of a deceased man comforting his dying wife over a period of several weeks. This, as well as the reports of the visions of the dying and clinically dead who have been resuscitated, suggests the alternative possibility of hallucination.

This possibility is considered in the context of the study of death-bed visions carried out by parapsychologist Dr. Karlis Osis who investigated over 100,000 deaths since 1960. While only about 10% of the dying are conscious immediately prior to death, Dr. Osis' statistics suggest that from half to two-thirds of these people have death-bed visions. This rate exceeds the 10-17% incidence of hallucinations among the population generally. The author attempts to dispel the idea that these visions are hallucinations by pointing out their consistency. Later, he tries to draw the same conclusion from their disparities. Thus, he fails to convince.

The strength of evidence for a spiritual existence increases when out-of-body experiences are examined. Various studies suggest that 19-45% of the population has had this experience. As Mr. Currie points out, the best evidence derives from those cases where the individual is not only seen in apparitional form by others, but also is able to accomplish something before witnesses or to observe separate but synchronous events which can be immediately corroborated. A number of convincing cases are reported. At the least, the skeptic must suspend judgement in lieu of an alternative explanation of the phenomena.

The investigations testing the hypothesis of reincarnation are impressive. The regression of individuals under hypnosis into past lives confronts us with cases such as a Philadelphia housewife talking archaic Swedish with a male's voice.

Perhaps the most sophisticated approach to the study of this phenomenon is that of Dr. Helen Wambach who regressed over 1,000 people. Her approach has been to test specific hypotheses. Their confirmation would support the validity of the evidence provided by her subjects. If, for example, a person reports living in a particular time and place, the responses to prestructured questions should be consistent with that time and place. The questions focused on racial characteristics, landscape, climate, food, utensils, architecture, clothing, and money. Separate historical and archeological evidence was then utilized to check the validity. One might expect regressions to reflect wishfulfillments and fantasies. Yet, the lives reported are ordinary: peasants, beggers, barmaids, etc. Some subjects whose past lives were in the 20th century provided details which often could be confirmed.

It appears less difficult to demonstrate credibly the facts of a spiritual existence and reincarnation than it is to demonstrate their meaning. Professor Currie presents evidence from which a karmic process in reincarnation might be inferred. The doctrine of karma comes to us from eastern religion and philosophy. It is a doctrine of spiritual self-betterment achieved through a sequence of physical lives. According to the author's reports, the sequences and content of past lives themselves imply karma and interrogations of the spiritual entities tend to confirm it.

It is difficult to get reliable interpretations from spiritual entities regarding the nature of death or the meaning of reincarnation. Nevertheless, in this book, the reader's acceptance of each level of evidence in support of basic facts leads inevitably to reliance upon the spirits themselves for further evidence and interpretations of it.

The final chapter presents Currie's elaborate inference regarding another idea: that all physical matter is imbued with energy which itself over time combines and evolves into a more complex form of energy. This concept is presented to explain past-life regressions where subjects report recollections of existence as lower forms of life. This, combined with the author's presentation of the ultimate end of spiritual evolution, constitutes the most difficult part of the book to accept.

However, "You Cannot Die" is a fascinating, well-written book to be recommended to anyone interested in the subject matter.

COMMUNITY MENTAL HEALTH TRAINING IN RURAL ALASKA: A REPORT ON A PROGRAM

Eric W. Trupin, Ph.D.

Roland D. Maiuro, Ph.D.

In a recent national survey investigating the unique problems, needs, and resources of rural mental health centers, almost all rural agencies were found to be in the position of serving wide geographic areas with too few staff.[1] Lack of adequate staffing appears to be additionally compounded in the rural areas of Alaska where rapid turnover of mental health professionals has been a chronic problem.[2] This problem is further exacerbated by the fact that open positions in rural Alaska often go unfilled for extended periods of time, apparently due to lack of interest by potential candidates and the lack of appropriate skills and qualifications by the majority of the applicants.

It is now recognized that a major part of the problem in providing adequate manpower for rural communities lies in the inadequacy of current academic curricula. Most academic graduate programs in psychology and psychiatry are located in urban areas and have few, if any, offerings in rural community mental health.[1,3] To be at all relevant to rural areas, such as those in Alaska, current training programs must be expanded to include experiences designed to develop a wide range of skills beyond traditional psychodiagnostic and psychotherapeutic strategies. Changes within professional education programs which allow for greater clinical experience relevant to rural areas appears to be clearly indicated. The purpose of this paper is to report on a rural internship training program at the University of Washington designed to meet some of these training needs.

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Roland D. Maiuro, Ph. D, Director, Outpatient Psychotherapy Unit, Harborview Community Mental Health Center.

Description of the Program

Through arrangements with the Gateway Community Mental Health Center in Ketchikan, Alaska and neighboring communities in Southeast Alaska, the University of Washington has been conducting an internship program in community mental health. This experience has been made available primarily to clinical psychology interns and psychiatric residents as a four-month rotation and involves full-time work and temporary residence in the immediate community. Supervision of the interns' experience is provided by University faculty versed and experienced in community mental health concepts and the staff of the rural mental health center. An attempt is made to immerse the trainee in a wide variety of community mental health activities as

1. Gertz, B., Meider, J., and Pluckhan, M. L. A survey of rural community mental health needs and resources. Hospital and Community Psychiatry, 1975, 26, 816-819.
2. Bloom, J. and Richards, W. Mental health program development in rural Alaska–changing roles of public and private psychiatrists. Alaska Medicine, 1976, 18, 25-28.
3. Feldman, S. Promises, promises or community mental health services and training: Ships that pass in the night. Community Mental Health Journal, 1978, 14, 83-91.

intensively as possible. These activities include consultation to schools, physicians, social and legal agencies as well as paraprofessionals within the mental health centers. Development of a working knowledge of child and human development is emphasized within the University program and consultation on child-related problems is arranged to provide experiences related to prevention. Knowledge of child development and expertise in school consultation and child-related problems provides the trainee with an area of competence rarely available in community settings and it allows immediate entry into a system often impervious to time-limited consultations.[1] The intern is also periodically assigned "on call" duty to develop crisis intervention skills. From the beginning of the rotation, knowledge and use of community organization are stressed and facilitated by a formal orientation involving a series of interviews and meetings between the intern and community leaders.

Advantages of Rural Training Programs

Since establishing the training program, we have found the resulting partnership between the University and the Alaskan mental health agencies to be mutually rewarding. Beside offering an excellent training setting for the development of a professional identity congruent with community work,[4] we believe that such rural internship programs have the potential for providing a number of important benefits for rural mental health agencies.

Perhaps the most obvious advantage for the mental health agency is the immediate addition of much needed manpower. Supervised interns and residents can provide a relatively economical source of service in the areas of evaluation, treatment, and consultation. Such trainees can also help "fill in the holes" by providing expertise in areas in which the regular staff may have had little training (e.g., behavior therapy approaches; the evaluation and treatment of learning disabilities in children).

Having been recently trained, clinical psychology interns and psychiatric residents also provide a valuable source of in-service training with respect to new developments in the field. The lack of continuing education opportunities and the resulting sense of professional and ideological isolation has commonly been identified as a contributing factor to job dissatisfaction and staff turnover in rural areas.[5] In fact, a recent survey showed that psychiatrists based in Alaskan public agencies only remain in practice for an average of 2.6 years.[2] Involvement of residents and interns in a clinical service setting tends to foster a sense of professional growth which can help decrease "burnout" and turnover rates among regular staff. The professional identity of rural mental health center staff can similarly profit from the increased status and prestige which often accompanies association with university-based health science programs.

The establishment of mental health training programs in rural Alaska also has the potential for increasing the quantity of job applicants for regular staff positions. Firsthand exposure of mental health workers who are in training to rural Alaska settings can help disabuse fears and myths and help disseminate more realistic expectations and factual information regarding opportunities for living and working in such areas. With the greater visibility given to rural agencies involved in training, one would expect the number of applicants, particularly much needed young professionals who are willing to relocate and work in rural areas, to increase. Preliminary evidence to support this expectation comes from the fact that a number of our interns have applied for and assumed positions in rural Alaska at the end of their training.

Training programs based in rural Alaska not only have the potential to increase the number of mental health workers interested in taking jobs in such areas but also the number of *qualified* applicants. It is clear that working in rural areas requires special skills and skills which are commonly lacking in purely urban-trained professionals. Knowledge of rural politics, power structures, informal patterns of communication, the values and mores of rural residents and ethnic groups, as well as the ability to function as a flexible and resourceful generalist, are attributes rarely seen in the repertoire of a traditionally trained mental health professional. In fact, a large number of rural community mental health workers feel that traditional mental health training is of questionable relevance and consider field work in rural agencies to be prerequisite to employment in such areas.[1,6] An intensive rural internship program can help provide such experience and significantly enhance the employability of mental health professionals for many Alaskan areas.

Summary and Conclusions

The community mental health training program in rural Alaska is a relatively new program at the University of Washington and its long-

4. Maiuro, R. D., and Trupin, E. W. Rural internships: Fixed role therapy for the community mental health professional. Hospital and Community Psychiatry, in press.
5. Gurian, H. A decade in rural psychiatry. Hospital and Community Psychiatry, 1971, 22(2), 56-58.
6. Berry, B. and Davis, A. E. Community mental health ideology: A problematic model for rural areas. American Journal of Orthopsychiatry, 1978, 48(4), 673-679.

term effects are difficult to assess. However, we have found the training arrangements between the University and the Alaskan mental health agencies to be mutually rewarding. Besides offering an excellent setting for the training of community mental health professionals, we feel that such rural internship programs have shown potential for providing a number of benefits for rural mental health agencies. Such benefits would include an economical source of immediate manpower to help alleviate inadequate staffing patterns, continuing education and professional development for regular staff, and increases in both the quantity and quality of job applicants for positions in rural Alaska. It is recommended that rural Alaskan agencies consider collaborating with university-based community mental health training programs to help meet immediate service needs to insure a valuable source of qualified personnel in the future.

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Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register,* 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

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Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

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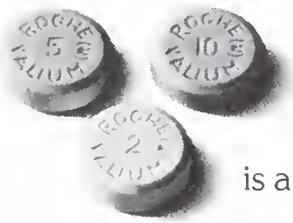
ALASKA MEDICINE

Volume 21, Number 6 November 1979

A character all its own.



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But the individual character of Valium is even more apparent clinically than pharmacokinetically. And far more significant. That's because of the patient response obtained with Valium. A response which brings a calmer frame of mind. A response which has a pronounced effect on the somatic symptoms of anxiety, particularly muscular tension. A response which helps the patient feel more like himself again because of the way Valium reduces the overwhelming symptoms of anxiety and psychic tension.

Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

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The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

Usage in Pregnancy: **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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PORTRAIT OF AN ESKIMO TRIBAL HEALTH DOCTOR*

Sandra Juul

Before White men introduced their economy, medicine and morals, the Eskimo people had a cohesive, successful subsistence lifestyle. Their customs minimized the transfer of disease. They had methods to cure or alleviate most illnesses and injuries that did arise. Due to cultural misunderstandings, missionary influences stopped many of these traditional beneficial practices. Eskimo lifestyle became less nomadic and more villages were formed. New diseases and disease hazards were introduced against which only Western medicine proved effective. Eskimo people lost faith in their traditional cures. Many of these cures were forgotten due to disuse, repression, the lack of a written Eskimo language in which to record information and the failure of the earliest Western explorers and ethnographers to observe Eskimo medical practices except in relation to shamanism.

Contrary to the earliest accounts which described Eskimo curing practices in the context of shamanism and religion, in more recent years Westerners have acknowledged Eskimo anatomical knowledge and medical practices which are distinct from shamanistic practices (Marsh and Laughlin 1956; Lucier, VanStone, Keats 1971). Increasingly the Eskimo people themselves and social scientists are attempting to record Eskimo medical knowledge while those who have practiced Eskimo medicine are alive to share their information.

In Northwest Alaska the Mauneluk Cultural Heritage Program has published **Tinimum Mamirrutit** (1976) which records the knowledge of traditional Eskimo healing practices retained by Minnie Gray (Ambler), Bertha Sheldon (Shungnak), Arthur Douglas, Sr. (Ambler), Minnie Beaver (Kotzebue) and Lulu Geary (Buckland). Others who have been identified as having knowledge of traditional Eskimo medicine in Northwest Alaska include Louie Commack, Sr., Flora S. Cleaveland, Andrew Skin, Sr. and Della Keats. Della Keats has shared her knowledge of Eskimo practices and anatomical terms in the published literature (Lucier, VanStone, Keats 1971).

These valuable accounts of Eskimo healing practices describe **what** was done, but not **how** it was done. They are based upon recollections and verbal reporting, rather than direct observation. Descriptions of healing practices in the published literature tend to be general and vague, rather than specific and detailed. Based upon both observation and verbal reporting, this study attempts to provide a specific, detailed account of how one Eskimo medical practitioner treats her patients and her role as a health care provider in Northwest Alaska today. In addition to a description of her healing techniques and how they are applied to diagnosed health problems, this paper presents some broad comparisons between the Eskimo medical practitioner and Western medical doctors. The practitioner selected for this study is Della Keats, well-known in Northwest Alaska as the "Tribal Health Doctor."

At this time, most of the Native Health care providers in Alaska are working in the capacity of Community Health Aides. They have between 3 and 20 weeks of training in Western medical techniques, and they follow

*This study was made possible through a grant from the University of Washington with additional support from Dr. Wayne Myers, Director, WAMI Program, University of Alaska. Dr. Mim Dixon, Dr. Theodore Mala and Della Keats herself also gave me invaluable assistance.

Second year medical student at the University of Washington; Alaska WAMI student at Fairbanks, first year.

standing orders to treat the routine and emergency problems that arise in their villages. Indian Health Service doctors are available for daily consultation by satellite telephone. Cases which Community Health Aides cannot handle are flown to the nearest Indian Public Health Service hospital.

Della Keats is an anomaly in this system. As "Tribal Health Doctor," she travels to Northwest Alaska villages practicing a unique combination of traditional Eskimo medicine, western medicine and curing techniques which she has developed in her 55 years of practice.

Research Methods

To assist in this study, Della Keats invited me to stay with her from August 20 to September 6, 1978. During these three weeks we had lengthy discussions about the work she does, the types of problems she sees, anecdotal experiences and her general approach to healing.

In addition to my observing Della in Kotzebue (population 3,000) we traveled to Unalakeet (population 300) and Shaktoolik (population 140) where she held patient clinics and made house calls. During this time I observed and recorded 31 patient visits, 19 of which were house calls in the three villages. She treated 28 of the 31 and referred the other 3 to the hospital.

Information presented in this study is limited by the small sample of patient interactions observed, the short duration of the study and the summer season in which it was conducted which is generally a "healthy" time of year, the language barrier and the narrow range of problems observed.

Having just finished my first year of medical school, I had a limited understanding of Western medical science which permitted me to see and accept what Della Keats did without the prejudice that comes with extensive medical training.

Personal History

Della Keats was born in April, 1907, in Noatak, Alaska and grew up as one of 7 children. At 14 years of age she began spending time with the village health leaders, doing errands for them and learning their skills. She read books left in the village by the Public Health Nurses, and tried to practice the first aid techniques she learned from them.

When she was 16 years old, Della was wed in an arranged marriage. Shortly after this she began working with the village midwives, learning to care for pregnant women and deliver babies. She worked as a midwife until the 1950's, at which time most babies born in the region were delivered in the Indian Health Service hospital at Kotzebue.

Della has two sons and one daughter. When her oldest son was 9 and the youngest child was 2, Della assumed the responsibilities of both parents. She hunted, cooked, sewed, picked berries and trained her children. Della also raised 6 grandchildren and 5 nieces and nephews as her own children. During this time she continued to work with people in a healing capacity. In return for her help, people gave Della dried fish, smoked salmon strips, berries or something they had made. They expressed their appreciation, as they still do today, with big hugs, smiles and kisses, coffee and the ever-present berries.

In 1963 Della moved to Kotzebue, where she is living now, employed as a medical practitioner.

Role of the Tribal Health Doctor

Della is hired by Mauneluk (the Kotzebue area Native Health Corporation) as the "Tribal Health Doctor." She travels regularly to the 11 villages in the Kotzebe area: Ambler, Buckland, Deering, Kiana, Kivalina, Kobuk, Noatak, Norvik, Selawik, Shungnak and Pt. Hope. She also goes to more remote villages if an emergency or special request arises. In the villages she holds clinics as well as making house calls.

Her duties include training Rosalla Stone, another Eskimo woman to whom she has been teaching her skills for approximately one year. Rosalla will begin practicing tribal medicine by herself when Della feels she is ready. Della has also helped to train Community Health Aides.

In Kotzebue Della relaxes with her family and sees from 0 to 6 patients a day. She usually treats Kotzebue patients in her home; however, she also makes house calls.

The types of problems Della feels confident in treating include: abdominal aches and pains, injured joints, sprains, chronic back pain, chronic head pain, arthritis, muscle pains, constipation, diarrhea, some skin problems, dizziness and care of pregnant women. During the 3 week period Della treated the cases listed in Table 1.

Table 1

Distribution of cases by Type of Problem and Sex of Patient

Type of problem	Total No. of cases	No. of men	No. of women
Abdominal aches & pains (decr. appetite)	7	4	3
Chronic back pain	5	1	4
Dizziness, shortness of breath	4	2	2
Injured joints	5	3	2
Muscle pains	4	1	3

Skin problems	3	2	1
Sprained ankle	1	1	0
Diarrhea	1	0	1
Infertility	1	0	1
Arthritis, joint pain	1	1	0
Incontinence	1	0	1
High blood pressure	1	1	0
Total	34	16	18

The 28 patients treated account for 34 specific case problems.

Some problems Della diagnoses she refers to the IHS Hospital, including the following three situations which were observed:

> Patient complained of pain in her right lower abdomen. She could not walk or sit down without hurting. Della examined her and found a lump. She referred the patient to the hospital for a checkup.
>
> Patient complained of incontinence when she laughed, coughed or strained in any other way. Della applied an upward pressure to the uterus, pulled down the stomach and stretched it. She said the woman should have an operation for her prolapsed uterus as soon as possible and referred her to the hospital.
>
> Patient had noticed a birthmark on his scalp growing larger. Della told him to have it checked by a medical doctor.

Della refers to the IHS doctors those patients which she diagnosed as having new or old ulcers, broken bones, cancer or high blood pressure. She also refers cases which she feels may require an operation or some other form of medical attention.

I did not observe any contention or competition between Della and the Indian Health Service medical doctors. They work together to provide the best health care possible for their patients. As Dr. VandenBurg of the Kotzebue Hospital said, "Della is separate, but equal."

Healing Techniques

The techniques Della used to treat patients are listed in Table 2 which gives the frequency and relative frequency with which she used the techniques in the 28 cases observed.

Table 2

Frequency of Treatments

Technique	No. of patients on which technique was used	% of patients on which technique was used
Manipulating stomach	10	35.7
Manipulating intestines	9	32.1
Manipulating joints	3	10.7
Manipulating uterus	3	10.7
Manipulating liver	2	7.1
Manipulating spleen	1	3.6
Manipulating aorta	1	3.6
Manipulating fetus	0	0
Applying steady pressure (joints, vertebrae)	3	10.7
Exercises	10	35.7
External medications	4	14.3
Internal medications	4	14.3
Bandaging	2	7.1
Bloodletting and draining	1	3.6
Enemas	0	0
Hot or cold applications	5	17.9

The technique Della employs most frequently is using her hands to manipulate organs and apply pressure. She only works on patients 3 hours or longer after their last meal (the approximate time it takes for the stomach to empty). Based upon the observations listed above and my discussions with Della, a description of her healing techniques follows.

To manipulate the stomach, or "pull it down and stretch it", Della has a person lie on his back with his knees bent to relax his abdomen. With the side of her hand, smallest (5th) finger down, Della feels under the patient's ribs for the uppermost border of his stomach, which has a firm texture and a round shape. After locating the border, she pushes it in and towards the pelvis, applying a slow and steady pressure. The stomach descends and relaxes slowly and very noticeably, bringing immediate relief to the patient.

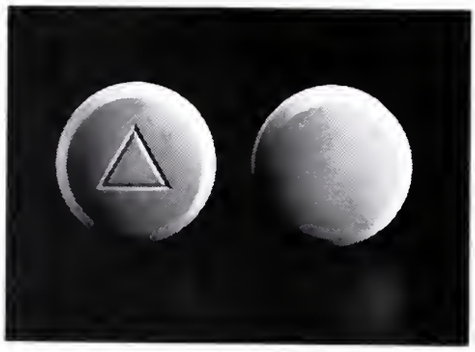
Della manipulates the large intestines in several ways. One is to push her hands deep into the pelvis directly medial to the hip, pulling the intestines towards the ribs. She does this bilaterally to "free the intestines, which are stuck to the pelvis," causing back pain. Similarly, she frees the intestines from the diaphragm area in cases of neck pain.

"Hooking up the Liver" is another technique Della uses. To do this, she has the patient sit facing away from her. Della very carefully and gently pushes her right hand fingers under the lower border of the liver. She then twists her wrist so that her fingers move up in a hooking motion. While doing this, her left hand anchors the liver to keep it from slipping to the side. She does this when she finds an enlarged or "dry" liver. After the treatment she rubs the abdomen with camphor liniment.

Della can feel the position of the uterus by pressing deep into the pelvis when the patient is supine with her knees bent. I observed her "pull up the womb" of a woman who had been trying to conceive for a year. Della stated that the uterus was bent and too far down. By applying a deep, upward pressure, she changed its position. She manipulates the uterus of a

The Maker

Examining a Few Myths About Prescribing.



Increasing pressure is being put on the practicing physician to prescribe drugs generically. You are told that brand-name products are universally "expensive" and generic versions are relatively "cheap." To make this case, the most extreme (rather than typical) price differentials are cited. Thus, consumers are led to believe that such differentials are commonplace. Even your knowledge and your motives as a physician are questioned.

Understandably, these views have created myths. We think it's time to examine them in the light of all the facts and ramifications.

MYTH: There are no differences in quality and performance between brand-name products and their generic counterparts. The corollary is that there are no differences among products made by high-technology, quality-conscious, research-based companies and those made by commodity-type suppliers.

FACT: The Food and Drug Administration does a good job in monitoring a generally excellent drug supply. Still, it has nowhere near the resources to guarantee the quality and bioavailability of all marketed products at any given time. Just a few months ago, for example, it noted that batches of tetracycline HCl capsules which met official monograph requirements were not bioequivalent to a reference product. As you know, there is substantial literature on this subject affecting many drugs, including such antibiotics as tetracycline and erythromycin. The record on drug recalls and court actions affirms strongly that there are differences among pharmaceutical companies and their products. Research-intensive companies have far better records than those that do no research and may practice minimum quality assurance.

MYTH: Industry favors only "expensive" brand names and denigrates all generics.

FACT: PMA companies make 90 to 95 percent of the drug supply, including, therefore, most of the generics. Drug nomenclature is not the important point; it's the competence of the manufacturer and the integrity of the product that count.

Matters.

MYTH: Generic options almost always exist.

FACT: About 55 percent of prescription drug expenditure is for single-source drugs. This means, of course, that for only 45 percent of such expenditure, is a generic prescribing option available.

MYTH: Generic prescriptions are filled with inexpensive generics, thus saving consumers large sums of money.

FACT: Market data show that you invariably prescribe—and pharmacists dispense—both brand and generically labeled products from known and trusted sources, in the best interest of patients. In most cases the patient receives a proven brand product. Savings from voluntary or mandated generic prescribing are grossly exaggerated.

MYTH: Drugs account for a major portion of the rise in health care costs.

FACT: Drugs represent a very small part of such costs. The amount of the health care dollar spent for prescription drugs was about 12 cents in 1967; today it is about 8 cents. And you as a physician are most conscious of how drug therapy can cut hospitalization, avert surgery, reduce office visits and keep patients on the job.

MYTH: Government intrusions into the marketplace will save tax money.

FACT: Government schemes always cost the taxpayer something, and the costs often exceed the benefits. Certainly, any federal "help," such as lists of wholesale drug prices sent to all physicians and pharmacists, will be no exception. Just think of the expense of keeping them current! Moreover, wholesale prices are poor guides to actual transaction prices and even worse guides to retail prices.

The PMA Position

We believe your freedom to prescribe, either by generic or brand name, should be totally unabridged. Otherwise, your prescribing prerogatives and your relationships with patients will be seriously impaired.

The maker does matter

After the myths about price and equivalency have been shattered, one fact stands out more clearly than ever: *The maker does matter.* As always, your best guide to drug therapy for your patients is to select products—both brands and generics—from manufacturers with credentials and performance records you have come to respect.

PMA

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
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pregnant woman threatening to miscarry by pulling it up in a similar fashion. After moving the uterus up, she "moves the large intestine under it to keep it from sliding back down."

During the last trimester of pregnancy Della can ascertain the position of the fetus by feeling the woman's abdomen. If it is a breech or transverse presentation, Della uses her hands to turn the baby. Using one hand to push and the other to pull, she applies torque slowly and gently. She prefers to do this no later than the 7th month, for fear of injuring the baby. Della can feel if the umbilical cord is tangled around the baby's neck and by gentle manipulation, she removes it.

For subluxed joints or sprains, Della holds the joint and "exercises it," carefully moving it up, down and sideways, feeling how it was dislocated. Then she pulls the bone out of the socket, twists it in the appropriate direction and slips it back into place.

Bloodletting is one of the very traditional practices that Della uses. She punctures and drains infected wounds and cysts. She also puntures areas of the head or back to let out "bad blood" in cases of chronic head or back pain, respectively. It has been noted that some of the points she uses in these cases are also acupuncture points. For snow blindness she punctures the skin between the eyes.

Stinkweed, (**Artemisia tilesii**), "Sargigruaq" in Eskimo, is a common and oft-used herb in the Kotzebue area. It is picked in September and dried. Later it is used as a compress or taken internally for many ailments including aches and pains, infections, colds and athlete's foot.

Treatment of Problems

Abdominal complaints were the most common problems in the study sample. These probably included ulcers, indigestion, gas pains, reflux esophagitis and gastritis. Della's standard treatment for such disorders is described in the following case:

> A middle-aged, slightly obese woman complained of abdominal pain right after eating. Della pushed gas from her cecum around to the rectum. She also stretched the woman's stomach. She then prescribed 1 egg and 2 Tbsp. milk to "keep the stomach soft."

In this case I could see and feel that the patient's stomach changed from a hard palpable mass to a more relaxed and flexible texture.

To treat chronic back pain Della first has the patient lie on his back with his knees bent. She checks to see if his intestines are "stuck to his pelvis." If they are, she frees them by pulling them towards the rib cage. She then stretches the stomach. After this she has the patient lift up first one leg straight, then the other, and finally both together, while checking for back pain. Usually, the patient feels better at this point. If not, Della asks him to kneel with both feet together and his chin supported on a chair. This position keeps the back very straight so Della can feel if a subluxation is present. If she diagnoses a subfluxation, she applies a firm, steady downward pressure on the vertebra until she feels it "click". She then applies hot towels and afterwards **Absorbine Jr.** Then Della instructs the patient to stand, raise his hands over his head and bend to touch his toes, both in front and on the sides. In all five cases observed, the patients felt better and were able to stand or bend more freely after this treatment.

For patients who complain of dizziness and shortness of breath, Della pulls down and stretches their stomachs. Della then pushes down the rest of the abdominal contents, maintaining that it gives the lungs more room. Della says that you can tell if someone is going to have a heart attack because the stomach feels hard and obstructs the aorta.

> A very obese woman approximately 50 years old, with an enlarged heart from rheumatic fever was experiencing dizzy spells, shortness of breath and visual hallucinations. Della pushes her stomach down in the direction of her pelvis so it wouldn't "push her heart." She also "softened" her stomach by rubbing it. After the treatment, the patient could take visibly deeper breaths.

To test for high blood pressure, Della feels the abdominal aorta by pressing in lateral to the umbilicus. If it is pumping very hard or too rapidly, she diagnoses the patient as hypertensive. To treat this problem, she moves her hands down the aorta to the iliac arteries. In one case she said the right iliac was "touching the pelvis." She describes her procedure this way: "follow the blood vessel from the hip back to the aorta and when there's small lumps like tapioca pudding, you push on them and they always disappear. They clog it and it gives you high blood pressure." She massages the iliac artery, softening it. In the case where the right iliac was "touching the pelvis," Della told the patient to sleep on his left side for one week after her treatment.

To treat sprained or dislocated joints, Della

"exercises" the joint to feel how it moves. She then pulls out and slips the bone back into place.

> A man couldn't hold anything between his thumb and forefinger because his thumb had been dislocated. Della followed the above procedure, and the thumb clicked into place. The patient felt better immediately and had full use of his thumb as he demonstrated by proudly pinching everyone.
>
> A middle-aged man presented a badly sprained, swollen and bruised ankle. Once again, Della followed the above procedure. When she was finished with her manipulations, she applied cold packs to reduce swelling, and wrapped the ankle in an ace bandage.

Patients who complain of stiff necks are palpated. If Della diagnoses a muscle spasm, she leads them in the following exercise: look to the left, straight ahead, right, straight ahead, up, straight ahead and down for 10 counts each, then repeat the routine faster and faster. Suddenly the pain seems to lessen and their necks become supple again.

Twice a year Della holds arthritis clinics. She takes a group of people to the Serpentine Hot Springs on the Seward Peninsula and assigns them each an exercise program. She starts with range of motion exercises to loosen the main joints and then gives progressively more difficult tasks to the people until they are more limber. The exercise program and baths in the hot springs seem to be beneficial for the patients.

For constipation or sluggishness Della often prescribes a lukewarm enema. She treats diarrhea with ¼ tsp. black pepper hidden in piece of bread and swallowed with water.

One case was observed in which the patient had alopecia (a loss of hair). Della prescribed washing her hair with Ivory soap, putting castor oil on her scalp for one day and then washing it out.

The main tools Della uses for diagnosis of a problem are the patient's complaint, symptoms, history and her own examination of the patient which is done primarily by touching.

Comparison with Western Medical Practice

Most of the patients Della sees are Native people (29 out of 31 cases observed). Della interacts with them on a very personal level, always sensitive and quick with a joke or story to help the person relax. She talks with them primarily in their native language, Inupiaq Eskimo. Western medical practitioners are trained to act in a different style with a more objective approach. In Western medicine the personal involvement is less casual as the separation between physician and patient is greater and there is less physical contact with the patient.

Della **touches** her patients. This is a very important factor, for it seems that many problems can be helped by the practitioner using his/her hands. Most Western doctors are trained to touch the patients only with diagnostic instruments or for diagnosis. In contrast to Della, they do not touch the patients with their hands as part of the treatment.

The combination of Della's concern, her conversation and the treatment she gives makes the clinic visit a rewarding experience for both the patient and the practitioner. The length of the visit was no longer than an average physician's visit (approximately 15 minutes per patient).

Although Della's actions may be difficult to understand in a Western medical context, there may be a correspondence between the two approaches to physiology and medicine. Della's treatment for joints and muscles is understandable in a Western physiological context, as is her technique for changing the position of the fetus through pressure with her hands. Della's method of diagnosing hypertension is a dying art in the medical profession, but older practitioners can still tell if high blood pressure is present by feeling the intensity and rapidity of the pulse.

Della often "stretches the stomach." In the Native culture, reflux esophagitis and gastritis are common problems. If the stomach is manipulated (stretched and relaxed) so it is no longer as contracted, there may be less reflux, and the patients' discomfort will lessen.

Della's treatment of back pain through manipulating the intestines may also have a physiological explanation. Sometimes paralytic ileus results from lower back surgery, suggesting that they are connected by a nerve pathway. Perhaps by manipulating the intestines Della is utilizing this pathway, thereby affecting the back. Another possibility is that the back pain Della treated in this way was the result of abdominal visceral pain reflected through the sympathetic pathways to the back. In this case, her manipulation of the viscera could have affected the primary problem, thus alleviating the back pain. The relationship between neck pains and abdominal treatments could be explained by possible phrenic nerve involvement, since Della breaks this kind of pain by touching the area of the diaphragm.

Summary

Della Keats is a 71 year old Eskimo Tribal Health Doctor employed by the Mauneluk Corporation to serve 11 villages in the Kotzebue area. Health care is also provided to the villages by Indian Health Service doctors and state itinerant Public Health Nurses. Della has a unique role which complements the Western medical practitioners. This study focused on the major types of problems Della treats: abdominal aches and pains, chronic back and head pain, dizziness with shortness of breath, injured joints, muscular pains, skin problems, arthritis and bowel disorders.

In treating these problems Della uses techniques derived from traditional Eskimo medical practices, Western medicine and her own experience. These techniques include: manipulating the stomach, intestines, joints, uterus, liver, spleen and aorta; the application of steady pressure; the ministration of external and internal medications; bandaging; bloodletting and draining; hot or cold application; and enemas. She often prescribes exercise to the patient.

The major difference between Della and Western medical practitioners is that most of her diagnoses and treatments involve touching the patient. Her style of healing is very personal and reflects her Eskimo culture.

CURRENT STATUS OF TREATMENT OF NEAR-DROWNING

Timothy A. Lamphier, M.D.

The cornerstone of emergency treatment for the near-drowning is resuscitation by mouth-to-mouth breathing and closed chest cardiac massage at the immediate site. It is best to persist in this recovery for several hours. Do not waste time attempting to drain fluid from lungs. If possible, empty gastric contents to prevent aspiration of swallowed water but do not waste time with this maneuver.

Over the past 20 years, great progress has been made by the recognition and correction of metabolic acidosis and arterial hypoxemia in the near-drowning victim. The new methods of evaluating pulmonary function and the ability to provide intensive pulmonary support has made significant strides in salvaging these patients. Positive end-expiratory pressure (PEEP) improves ventilation-perfusion ratios and arterial oxygen tension which can be measured by blood gas tension.

Eight thousand drowning deaths occur annually in the United States. Drowning is one of the leading causes of accidental death. Forty percent of all drowning deaths are accounted for by children under the age of 5 years and another 15 to 20 percent are accounted for by those aged from 5 to 20 years of age. It is believed that for every person who dies, there will be one survivor who recovers either with some degree of permanent brain damage or completely. Over ninety percent of all drowning accidents occur within 10 yards of safety.

Hematocrit values remain constant in victims of drowning. Therefore whenever there is a rapid decrease, it will mean a sudden decrease in extravascular blood loss e.g., ruptured spleen. Whenever there is evidence of rapid blood loss, intra-abdominal bleeding, skull fracture with epidural or subdural hematoma, etc., should be considered. Sea water has a higher osmotic pressure than plasma therefore crenation of red blood cells rather than hemolysis will take place. In the first three minutes dilution lowers serum sodium, chloride and calcium concentrations. The prothrombin time will lengthen. Hemoglobinemia, hemoglobinuria, and hyperkalmeia occur because of the osmotic changes of hemodilution and hemolysis.

On a volume basis, salt water is a least twice as lethal as fresh water aspiration. Salt water aspiration disrupts the integrity of the alveolar-capillary membrane and plasma proteins and fluid move or extravasate into the alevolar lumen. Pulmonary edema follows because of the resultant shock and hypovolemia. In addition, aspiration of impurities in the water, strenuous exercise, trauma, exhaustion and exposure to cold further complicate the situation. Swallowing of water with vomiting may then ensue and aspiration follows.

There are four types of drowning: 1. **Wet drowning**, about 80% of all cases with aspiration of large amounts of fluid into the tracheobronchial tree. 2. **Dry drowning** in which no water enters the lungs because of intense spasm of the glottis. This type represents 90% of patients who are resuscitated. 3. **Secondary drowning** (pulmonary edema) as a part of the adult respiratory distress syndrome with an influx and circulating protein into the lumen of the alveolae and causing both metabolic and respiratory acidosis with hypercarbia and hypoxia. In this type there is a delay of 20 minutes to 72 hours. 4. **Immersion Syndrome**,

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is the result of sudden death. A vagally induced cardiac arrest because of sudden exposure to cold water may be the cause. Alcohol may be part of the etiology.

Some new advances in the treatment of children have taken place in the past few years. It was well-known that a child becomes a vegetable, if revived after four or five minutes of immersion. However, there was a child in Norway who, after 40 minutes of submersion with concurrent hypothermia, had a complete neuro-physiologic recovery. Such a dramatic recovery does not take place in warm or tropical waters. Doctors Bradley Peterson and Edward Alderete of Stanford University Medical Center have postulated that adding therapeutic hypothermia and barbiturates with standard CPR in young near-drowning victims might halt brain damage. They refer to it as CPCR - cardiopulmonary cerebral resuscitation. Their objective is to drop the victim's core temperature to between 31 and 32°C. To obtain core temperature, a rectal probe is used because standard thermometers would be useless. Minutes count and the cooling process must start immediately in the Emergency Room. The child is packed in bagged ice. Once the temperature has dropped into the desired range, it is maintained with a thermal blanket. Constant monitoring such as is reflected in the flow sheet attached includes mean arterial pressure, CVP, blood gases, phenobarbital levels, body temperature and heart beat. The child must be completely paralyzed to control shivering and other muscle activity. The Stanford physicians recommend that 0.5 mg/kg of pancuronium bromide (Pavulon) be injected directly into the I.V. line. It must be repeated every hour as the drug's half-life is only 45 minutes. Complete respiratory support is mandatory. The prime reason for giving barbiturates is to keep the intracranial pressure from rising. The exact mechanism for this effect may have something to do with suppressing or stabilizing brain metabolism. For this purpose these men use either pentothal or phenobarbital to obtain levels in the blood such as 40 to 50 ug/ml. They recommend that with pentobarbital, which has a half-life of only two to three hours and is easily controlled, a loading dose of 5 mg/kg be followed with hourly pushes of 1 mg/kg with careful monitoring of blood levels. Phenobarbital is much more difficult to control as its half-life is exceedingly long - 54 to 88 hours. A bolus of 15 mg/kg is given and then a blood level is maintained with 5 to 10 mg/kg a day given in two or more divided doses. Phenobarbital is the superior anticonvulsant drug when there exists post-resuscitation seizures. They emphasize the use of dexamethasone (0.2 to 0.5 mg/kg) every six hours. They state that "brain damage per se is not reversible and that once a brain cell is lost, it's lost." They explain that in adults reducing body temperature is not practicable. They warn that if core temperature has dropped below 31°C, it is necessary to warm the heart to 28°C because thermal injury is as deadly as drowning.

To be successful, immediate resuscitation at the scene by mouth-to-mouth breathing and closed-chest cardiac massage is imperative. When the rescuer is alone, four breaths are given by mouth initially and then two breaths with every 15 cardiac compressions. If there are two rescuers, four quick deep breaths are administered initially and then one breath is given by one person to coincide with every 5th cardiac compression by the other. If possible, draining the mouth and lungs with the body placed slightly head-down improves survival especially in salt water drowning.

Theraphy does not differ for salt water and fresh water drowning. All victims must be admitted to the hospital for observation because Acute Respiratory Distress Syndrome (ARDS) can occur after 72 hours. Signs of dyspnea or an increasing respiratory rate may herald the onset of this syndrome. Baseline data from arterial blood gases determinations and a chest x-ray is obtained initially and repeated as often as necessary.

A volume-controlled ventilator with positive end-exspiratory pressure (PEEP) and supplemental oxygen tends to reverse the hypoxia produced by fluid-filled alveoli and bronchiolar collapse.

I.V. fluids are administered to maintain adequate urinary flow, to maintain blood pressure and cardiac output. Overhydration will increase pulmonary edema and must be avoided. Hematocrit and serum electrolyte levels show little variation from normal.

When the near-drowned person still remains unresponsive, CPR is continued, an endotracheal tube is inserted and a volume-controlled ventilator is connected to the endotracheal tube. The stomach is decompressed with a nasogastric tube.

When pulmonary edema occurs, a PEEP of 5 to 20 cms. of water will improve oxygenation. Thusly, atelectatic airways remain open during expiration and decreases the alveolar-arterial gradient and physiologic shunt. The objective is to keep arterial oxygenation to a least 60 torr with oxygen and PEEP.

Chemical penumonitis may occur as a result of aspiration of gastric contents.

A Swan-Ganz flow-directed thermo-dilution catheter is helpful in the administration of I.V. fluids and measurements of cardiac output,

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	Darvon 65 mg propoxyphene	.66 (100)	.99 (99)	1.13 (96)	.99 (96)	.80 (96)
Statistical significance		$p<0.02$	$p<0.01$	$p<0.05$	$p<0.02$	$p<0.002$

*0 = No relief 1 = Partial relief 2 = Complete relief

Data on file at The Upjohn Company

Motrin demonstrated statistically significant greater relief of pain than did Darvon at all time intervals.

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Relief of mild to moderate pain.

Contraindications: Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

Warnings: Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

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Drug interactions. *Aspirin:* used concomitantly may decrease Motrin blood levels. *Coumarin:* Bleeding has been reported in patients taking Motrin and coumarin.

Pregnancy and nursing mothers: Motrin should not be taken during pregnancy or by nursing mothers.

Adverse Reactions

Incidence greater than 1%

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*Incidence 3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

Overdosage: In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

Dosage and Administration: Rheumatoid and osteoarthritis, including flares of chronic disease: Suggested dosage is 300, 400 or 600 mg t.i.d. or q.i.d.
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pulmonary artery pressure, and pulmonary wedge pressure.

Sodium bicarbonate intravenously will correct metabolic acidosis.

Such cardiac abnormalities as atrial fibrillation and conduction defects usually represent hypoxia or respiratory or metabolic acidosis.

An ominous sign is prolonged unconsciousness or relapsing coma as a result of severe cerebral anoxia and/or edema.

Current therapy is designed to reverse the hypoxia and acidosis with use of supplemental inspired oxygen and infusion of sodium bicarbonate. Nonetheless, with this therapy, the respiratory status frequently deteriorates. A clinical picture of progressive dyspnea, pink frothy sputum, diffuse bilateral pulmonary rales, and a roentgenogram of the chest consistent with diffuse pulmonary edema develops.

Methylprednisolone sodium succinate is a currently accepted standard therapy for patients who had nearly drowned in fresh water. Resolution of pulmonary edema with improvement in oxygenation and ventilation occurs. Prior to the introduction of steroid therapy, mortality had been high, but deaths have sharply decreased following the addition of steroids.

In following the course of these patients, serial roentgenograms of the chest are obtained at frequent intervals. Antibiotics are added if the aspirated water is known to be contaminated, if infection is evident, or if there is a possibility of gastric aspiration.

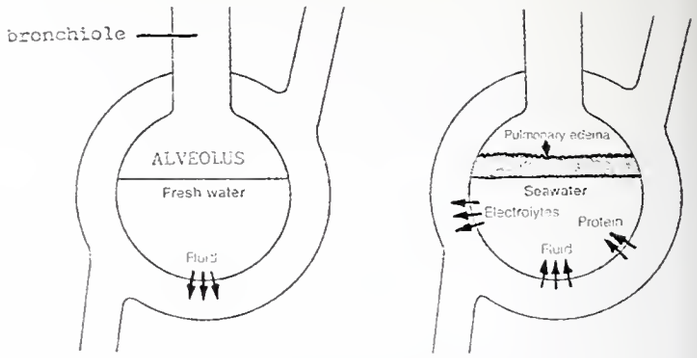
Any aspirated fluid can cause inactivation of surfactant and total alveolar collapse resulting in the ARDS. There is a loss of lung compliance.

"Near-Drowning" is a syndrome of acute asphyxia with severe hypercarbia, arterial hypoxemia, and acidemia. The hypercarbia produces respiratory acidosis and the anaerobic metabolism during hypoxemia results in metabolic acidosis.

In both fresh water and salt water near-drowning electrolyte homeostasis is reestablished rapidly, but the victim continues to be hypoxemic and acidotic. In both instances near-drowning causes pulmonary insufficiency. However, the sequence of events leading to pulmonary edema is different.

Pulmonary edema and arterial hypoxia occur in both fresh water and salt water drowning.

This diagram depicts the differences in fresh vs. salt water aspiration. When a near-drowning victim breaths **fresh water** into his lungs, it's **rapidly absorbed into the circulation: salt water**, by contrast, draws fluid **from the circulation into the alveolar spaces**. There are diffferences in tissue and organ system



response to these two mechanisms. The effects of near-drowning on the lungs differ according to the type of water although the immediate resuscitation procedures are the same for both.

The Table below contrasts the differences between Fresh and Salt Water Drowning. Note that there is no difference in the treatment of these conditions.

HYPOXIA

FRESH WATER: Normal surface tension properties of surfactant are altered, with consequent collapse of the alveoli; uneven ventilation and recurrent collapse continue until surface-active material regenerates.

SALT WATER: Fluid in the alveoli interferes with ventilation and produces a greater degree of hypoxia.

BLOOD VOLUME

FRESH WATER: Absorption of water into the circulation causes transient hypervolemia, decrease in blood osmolarity and viscosity, and elevated CVP.

SALT WATER: The water drawn into the alveolar spaces causes a persistent hypovolemia and increase in blood osmolarity and viscosity.

SERUM ELECTROLYTES

SALT WATER: Ingestion of large amounts may complicate the picture. General comments: Changes are usually insignificant, but severe hypoxia and acidosis may produce hyperkalemia.

HEMOGLOBIN

FRESH WATER: Hemolysis occurs after aspiration of at least 11 ml/kg of body weight with a possible decrease in hemoglobin.

HEMATOCRIT

General comments: Technical problems make correct measurements almost impossible and interpretation difficult.

CARDIAC CHANGES

General comments: Victims seldom aspirate enough water to bring about ventricular fibrillation.

CENTRAL VENOUS PRESSURE

FRESH WATER: Aspiration of large quantities produce a persistent rise.

SALT WATER: Aspiration of large quantities produces an initial rise, followed by a rapid drop to zero.

General comments: An increase coincides with hyperventilation but falls rapidly to normal when only small amounts of liquid have been aspirated.

NEUROLOGICAL EFFECTS

SALT WATER: Ingested in large quantities, the magnesium ion may cause lethargy, drowsiness and coma.

URINARY SYSTEM

FRESH WATER: Hemolysis and hypotension produce acute renal failure.

SALT WATER: Hypoxia and hypotension produce tubular necrosis, resulting in acute renal failure.

The following protocol for a treatment of near-drowning may be of value:

1. Open and clean out the patient's mouth and pharynx.
2. Carry out mout-to-mouth ventilation

OR

3. Mouth-to-nose ventilation.
4. Follow the routine ABC's of cardiopulmonary resuscitation: i.e., patent airway, breathing - artificial ventilation, circulation - mechanical support, i.e., epinephrine or $CaCl_2$ (or both) into heart, electrical defibrillation.
5. Tracheal intubation and suction.
6. Gastric intubation and suction.
7. **One Hundred Percent Oxygen** by mask and oxygen to be followed by:
   a. A volume-cycled respiator - (superior to pressure-cycled respirator).
   b. Keep an F_1O_2 of eighty percent and 10 cm. of PEEP maintaining arterial pO_2 at 60-80 mm. Hg. Functional residual capacity and static lung compliance are increased. Watch for complications of PEEP such as pneumothorax or wet-lung syndrome.
   c. Oxygen may be necessary for days or even weeks.
8. **Sodium Bicarbonate:** Give I.V. immediately - 0.3 to 0.4 mEq/lb. of body weight. One vial = 44.6 mEq/ - (to combat acidosis). Keep pH at 7.30 Record on Flow Sheet.
9. **Solu-Medrol:** 30 mg/kg I.V. stat. over a ten-minute period. Follow with 5 mg/kg/24 hours I.V. every 4 hours (to resolve pulmonary edema and improve oxygenation).
10. **I.V. Fluids:** - (Electrolyte Replacement)
    a. Give Ringer's Lactate - while awaiting laboratory results.
    b. Massive Doses of Albumin I.V. - (has an immediate diuretic effect).
    c. Fresh whole blood is best but always use a SWANK blood filter.
11. **Combat Shock** with I.V. fluids thusly: - (Blood volume expansion)
    a. Plasma for salt-water drowning 10 ml/kg.
    b. Packed red cells for fresh-water drowning - 10 ml/kg.
12. **For Bronchospasm:** ISUPREL (1:200) - 0.5 in 2 ml of saline as an aerosol.
13. **Maintain CVP or Swan-Ganz Pulmonary Wedge Monitor:**
    a. Keep CVP Less than 15 cm of H_20 or wedge pressure at less than 25 mm Hg to avoid pulmonary edema.
14. **Serial Chest X-rays:** to check on the possibility of aspiration and provide baseline.
    Check on the following three possibilities:
    a. No parenchymal abnormality.

    OR

    b. Peri-Hilar Pulmonary Edema.

    OR

    c. Generalized Pulmonary Edema.
15. **Laboratory Studies:** (Monitor every six hours).
    a. CBC including Hct and Hb.
    b. Coagulation Profile - (Platelets, etc).
    c. Serum Electrolytes - Na^+, Cl^-, K^+, and CO_2.
    d. Blood Gases - (pH, pCO_2, and pO_2) - (Serial determinations).
    e. Blood Chemical Profile$_{16}$.
    f. Creatinine.
    g. Drug Profile.
    h. Alcohol Profile.
    i. Urinalysis.
    j. EKG
    k. Cardiac Output.
16. **Bronchial Dilators:** Aerosol.
17. **Postural Drainage.**
18. **Monitor with EKG.**
    a. Hypoxia will elevate ST segment.
19. **Broad Spectrum Antibiotics:** e.g. Keflin I.V.
    a. To prevent infection.
    b. To combat infection from aspiration.
20. **Monitor with Flow Sheet Every 15 Minutes:**
    a. Pulse.
    b. Respiration.
    c. Blood pressure.
    d. Temperature.
    e. Urinary output (Foley catheter).
    f. Check for free Hb in urine (hemolysis and red cell ghosts).
21. **For Convulsions:** Valium 0.3 mg/kg I.V.
22. **For Cardiac Failure:** Digitalis and ?? Lasix.
23. **Hospitalize Every "Near-Drowning" Victim** for a minimum of 24 hours for continuous clinical observations.
24. **Control Lowered Core Temperature** with a thermal blanket.
25. Control of Shivering and Muscle Activity

25. Control of **Shivering and Muscle Activity** with Pavulon 0.5 mg/kg directly into an I.V. line.
26. **Monitor Blood Levels of Pentobarbital or Phenobarbital.**

CONCLUSION

There is outlined above a suggested protocal for treatment of the near-drowning victim.

The usual victim will not survive after being submerged for 10-12 minutes although rare instances have been reported. It has been estimated that close to 90,000 patients are treated annually for near-drowning and that 90% survive. Recently, it has been shown that high doses of barbiturates may protect the brain from cerebral edema and cerebral hypoxemia.

The role of paramedical and lay people in providing cardio-pulmonary resuscitation at the site is of paramount importance.

The salvage rate also is dependent on the circumstances of the drowning episode, the patient's ability to hold his breath, the general state of health of the victim and his age.

In treatment, the usual ABC's of cardio-pulmonary resuscitation are immediately carried out and one must assume that a severe intra-pulmonary shunt exists. Adequate oxygen supply frequently does require endotracheal intubation and mechanical support of venti-

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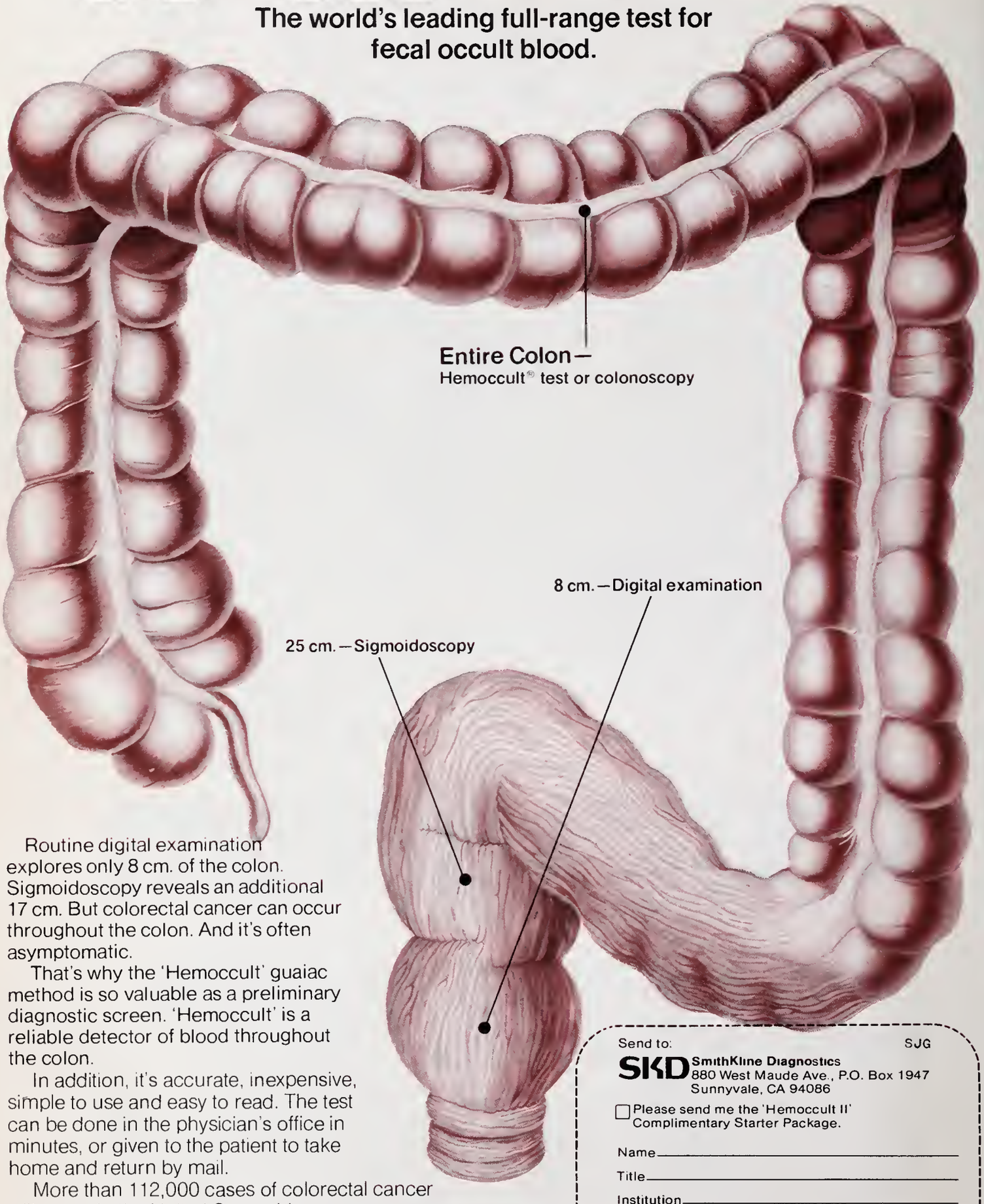

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lation. Ambulance personnel can establish intravenous lines and electrocardiography as well as blood pressure monitoring via telemetry with emergency lines.

In this emergency, fluid replacement depends on serum electrolyte concentrations and blood volume. Effective ventilation, oxygenation and circulation must be maintained before irreversible cerebral hypoxia sets in. The Stanford group has demonstrated the important role of lowered core temperatures in recovery.

The most important factor is that cardiopulmonary resuscitation must begin at the scene. All drowning victims must be admitted to a hospital for observation, regardless of their condition because the adult respiratory distress syndrome (ARDS) may be delayed for as much as 72 hours. ARDS may be heralded by dyspnea and an increased respiratory distress rate. Daily monitoring should include arterial blood gas determinations and serial chest x-rays. The volume-controlled ventillator with positive end-expiratory pressure (PEEP) plus supplemental oxygen is of aid in reversing hypoxia caused by fluid-filled alveoli and bronchiolar collapse. Over-hydration should be avoided to prevent pulmonary edema. The neurologic outcome often cannot be determined immediately. Complete recovery or residual impairment may take place.

FLOW SHEET
NEAR-DROWNING
SIGNS AND SYMPTOMS

	Date
	Time of Day
	Time Removed from Water
	Minutes Submerged
	Temperature of Water
	Fresh or Salt Water
	Status of Health Prior to Immersion
	Present Status of Patient
	Blood Pressure/Pulse
	Respiration
	Cerebral Edema
	Convulsions
	Peripheral Vasoconstriction
	Gastric Engorgement
	Pulmonary Edema
	Vomiting
	Laryngospasm
	Hypertension
	Bradycardia
	Arrhythmias
	Cyanosis
	Atelectasis
	Apnea
	Disorientation
	Coma
	Opisthotonos
	Pupils - constricted dilated
	Rigidity of Lower Extremities
	Plantar Flexion
	Cardiac Arrest
	Vital Signs
	Core Temperature
	Oxygen 100%
	Arterial Gases
	Mean Arterial Pressure
	Serial chest x-rays
	EKG Monitor
	CBC + Hb + Hct
	Electrolyte Panel
	SMA_{12}
	Creatinine
	Urinalysis
	Free Hb in urine a. Hemolysis b. RBC Ghosts
	Blood Volume
	Central Venous Pressure CVP OR
	Swan-Ganz
	FEV_1
	Ventilation-Perfusion Ratio
	Coagulation Profile
	Drug Profile
	Alcohol Profile
	Sodium Bicarbonate Level
	Blood Level of Pentobarbital or Phenobarbital
	Pulmonary Artery Pressure
	Metabolic Acidosis
	Respiratory Acidosis
	Hyperglycemia
	Hyperosmolarity
	Gram Stain Culture Sensitivity
	Cardiopulmonary Resuscitation a. Epinephrine into heart b. Calcium Chloride into heart c. $NAHCO_3$ (correct rapidly to pH 7.3) d. Electric defibrillation
	Endotracheal Intubation with Suction

	Mechanical Support of Ventilation a. Volume cycled respirator b. Give O_2 as indicated by blood gases
	Fluids a. **Salt Water** - plasma b. **Fresh Water** - packed RBC
	Steroids
	Isuprel Acrosol
	Foley Catheter
	Intake-Output
	Overall Evaluation q 2-3 hours
	Antibiotics
	?? Digitalis
	Core Cooling Temperature Control
	Packing of Children in Ice
	?? Thermal Control Blanket
	Pentobarbital or Phenobarbital
	Pavulon
	Gastric Intubation & Suction
	Electrolyte Replacement
	Blood Volume Expansion
	Postural Drainage
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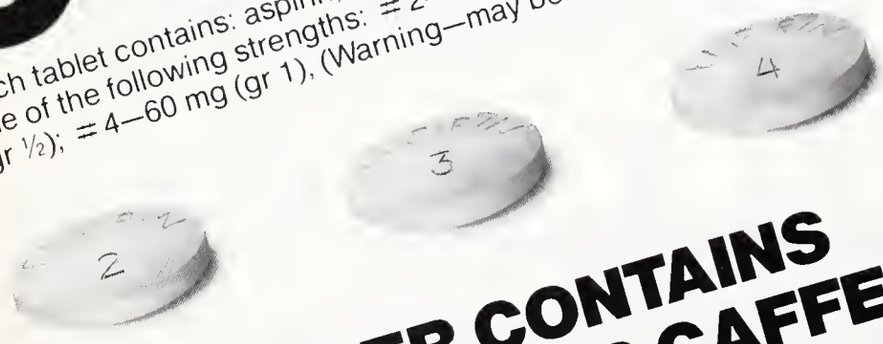

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HEALTH PLANNING IN ALASKA

A Historical Review and a New Law (PL 96-79)

Keith Brownsberger, M.D., F.A.C.P.

Lynn Chase, M.S.

All of you will certainly agree that the Federal Government is becoming more and more involved in health care. In the past the involvement often started with a group of persons asking Congress for money for a special medical project. Along with the federal funds came guidelines, accounting procedures, limitations and inspectors. These projects often went to special interest groups without any comprehensive health planning by the State or communities. In an attempt to get the communities and States involved in health planning, Public Law 89-749 was signed in 1966 - "Comprehensive Health Planning and Public Health Services Amendments of 1966." The purpose of this law was to have each state and its larger communities form citizen councils to plan for health care. This was suppose to help them direct federal funds to the most urgent health needs. These Comprehensive Health Planning (CHP) Councils were given very little funding and almost no power. It is hard to judge the impact of this law but it accomplished a few things: It brought health planners into the health care field and made a few citizens aware of health service problem.

By 1974 there were three major programs directing federal health care funds into states and communities: Comprehensive Health Planning, Regional Medical Programs and Hill-Burton. Public Law 93-641, "The National Health Planning and Resources Development Act of 1974" was developed in an attempt to eliminate all three programs and replace them with Health System Agencies (HSA's), State Health Coordinating Councils (SHCC's) and State Health Planning and Development Agencies (SHPDA's). More power was given to health planning with this law. In addition to the power to direct federal funds, the states were required to pass a "Certificate of Need Law." These State laws would limit hospital construction and limit change of health services even if federal construction funds were not involved. Unfortunately, the law excluded all federal hospitals from certificate-of-need laws. It also gave the ultimate power in all health funding to the Secretary of HEW. Many segments of the health industry opposed sections of the law and the AMA joined the State of North Carolina, the North Carolina Medical Association and the State of Nebraska in an unsuccessful attempt to declare PL 93-641 unconstitutional. The State of North Carolina contended that the law infringed on states' rights and the AMA claimed that the National Health Planning Law was an unlawful invasion of the patient-physician relationship. The suit was appealed to the U.S. Supreme Court and PL 93-641 was upheld. In the State of Virginia the medical society assessed each physician $50.00 to fund a "watchdog" committee to monitor the activity of each Health Systems Agency in that state. In most states physicians have become involved in HSA's and SHCC's, and tried to implement the law even though some didn't agree with all of its requirements.

Four years have passed since The National Health Planning and Resource Development

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Act went into effect. Some of the major goals of the legislation were to improve the health status of the residents, to improve quality of and accessibility to medical care services, and to contain the cost of health care. These goals were to be attained through a citizen participation process of health planning and implementation having its roots at the local level and feeding into a structure at the state and regional level. Since that time, 205 Health Systems Agencies (HSA's), most of whom are nonprofit corporations with representative boards of directors, have been established which geographically cover the entire United States. In each state, a State Health Planning and Development Agency has been designated. The other major entity created under the Act in each state is a State Health Coordinating Council, a statewide advisory body to each Governor on health planning issues. Each Health Systems Agency is charged with developing a five-year plan (Health Systems Plan) and a yearly implementation plan (Annual Implementation Plan) which describes the health status of the area's residents, suggests appropriate health system responses in identified problem areas, evaluates the medical care service resources, and proposes strategies to improve that sector of the health system. Local plans are integrated at the state level into a State Health Plan which is finally approved by the State Health Coordinating Council. Another statewide plan mandated in this legislation is the State Medical Facility Plan, which describes medical care services and facilities and projects future needs.

PL 93-641 provided the agencies with "teeth" in the implementation of their plans. The regulatory powers of the HSAs and the state agencies are present in the form of approval/disapproval authority over the expenditure (or potential reimbursement) of federal funds. In Alaska this authority has been extended to include state funds, as well. Capital expenditures or major changes in services by medical care facilities must qualify under the certificate of need authority in state statue, a regulatory tool of the plan implementation process. Outpatient programs such as alcohol, drug abuse, family planning, mental health, aging programs, as well as certain training programs, must also meet the requirements of the review process.

The implementation of this law has important implications for medical care policy in Alaska. In this state, three geographic areas (health services areas) were designated by DHEW after recommendation by the Governor. Later the state and federal government approved and funded three separate Health Systems Agencies (HSAs) to work within each area. According to the legislation over 50% of the members of the Board of Directors of the HSA must be consumers (cannot be directly or indirectly affiliated with medical care delivery) of health care. The remainder of the membership will be providers of medical care for which guidelines outline required and suggested representation from the medical care industry. At the state level, the Governor appoints six representatives from recommendations from each HSA and twelve members at large to form the State Health Coordinating Council. The State Office of Planning and Research in the Department of Health and Social Services has been designated by the Governor as the state agency authority. Each of the Health Systems Agencies has been broken down geographically into smaller subunits, known as subareas. In the southcentral health service area, the Anchorage subarea applied for and was accepted as a Subarea Advisory Council to the Health Systems Agency through the operation of the Anchorage Municipal Health Commission. The five groups mentioned above are listed below in Table 1 with names of physicians who either have been or currently are active with these organizations.

Table 1

Organization	Name	Location	Physician (Currently or Historical) Members of Governing Bodies
Health Systems Agency	Southeast Alaska Health Systems Agency	Ketchikan	David Johnson, M.D.
Health Systems Agency	Southcentral Alaska Health Planning and Development	Anchorage	Keith Brownsberger, M.D. Robert Johnson, M.D. William Larson, M.D. George Rhyneer, M.D.
Subarea Council	Anchorage Municipal Health Commission		Keith Brownsberger, M.D. V. B. Colyar, M.D. William Larson, M.D. John Muth, M.D. Aron Wolfe, M.D.
Health Systems Agency	Northern Alaska Health Resources Association	Fairbanks	William Doolittle, M.D. Peter Marshall, M.D. Wayne Myers, M.D.
State Health Coordinating Council			Keith Brownsberger, M.D. William Doolittle, M.D. George Longenbaugh, M.D. Wayne Myers, M.D.

Each of the Health Systems Agencies has completed and submitted their Health Systems and Annual Implementaion Plans. Each has developed a formal review process for the consideration of projects. All three have completed their conditional designation period and are now officially "designated" agencies. The State Health Plan has been completed and the State Medical Facilities Plan is in the latter stages of development with finalization projected for early 1980.

In early October 1979, President Carter signed **Public Law 96-79**, the "Health Planning and Resources Development Amendments of 1979". This law revises and extends for three years the health planning and resources development authorities first laid out in PL 93-641. This new health planning law makes some major changes that all physicians should

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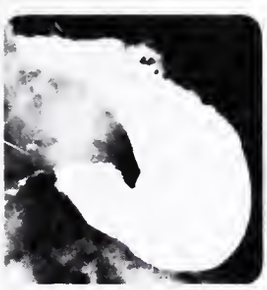
. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



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†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964

Merrell

understand. Certificate of Need is expanded to cover all diagnostic and treatment equipment worth $150,000 or more, regardless of location (including the physician's office) if it is to be used for hospital in-patients. Health Maintenance Organizations (HMOs) are now exempt from State Certificate of Need laws if they meet certain conditions.

To qualify for the exemption, the HMO must offer a basic package of medical services on a prepaid basis to at least 50,000 members; the services must be accessible to all members, and at least 75% of patients expected to use the services must be prepaid enrollees. An in-patient facility controlled by an HMO or one leased (long term) by an HMO could also qualify for the exemption. The exemption of the federally approved HMO facility poses concerns for non-HMO community hospitals. In an application for expansion, the community hospital must consider the influence on utilization of the HMO beds but the HMO may expand **without** consideration of community-wide hospital utilization. This is likely to have the effect of greatly favoring the HMO-related facility through restricting expansion of non-HMO services. It is, however, unlikely that an HMO with the above characteristics will develop in Alaska in the forseeable future, given the population growth currently projected.

PL 96-79 adds new goals to the national priorites for health planning including: identification and termination of unneeded services and facilities, adoption of cost-containment policies, more appropriate use of services and greater efficiency in the health care delivery system, increased use of out-patient treatment for mental health problems, and elimination of inappropriate hospitalization of mental patients. Planning agencies (HSAs) are also directed to give more attention to promoting competition in the health care industry.

From our experience with the South Central Health Planning and Development, Inc., the HSA for southcentral Alaska, we can declare that the members are not ogres. They are by-and-large hard working, dedicated people who spend a lot of time without pay trying to improve the health care system. They are often frustrated by time spent running this private corporation which depends on its funding from the state and federal governments. And there is often not enough time or money to gather proper information to make decisions on complicated projects. We can also declare that physician membership on the SHCC and HSAs is absolutely essential. There are health care issues which confront the members which only a practicing physician can really understand and explain to the others. The physician member will also gain new insight into how other citizens view the health care industry.

In summary, we have tried to give you a historical view of health planning in Alaska and to explain how it is working now. We have listed the agencies and the physicians who are familiar with the health planning activity. We assume that many of you do not like the Health Planning Laws and we are not attempting to change your mind. We hoped only to inform you, and encourage a few of you to get involved.

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3. Werlin SH, et al: Implementing formative health planning under PL 93-641. **NEJM**, 295:698, September 23, 1976.
4. Health Planning and Resources Development Amendments of 1979, (PL 96-79). **Legislative Roundup Digest** by AMA, October 1979.

THOMAS G. FELLER, M.D.
1940 - 1979

During a pleasant week in mid August, Tom Feller and his family were camping at Chinpoot Bay, near Homer. Tom's wife, Silver, and two of his children were in camp, and so was his sister, Janice Brown, who was visiting from Virginia.

Tom and his son, Christopher, went canoeing. The bay was not rough; reportedly, there was some fog. They did not return when expected and a search was started. The next day, Christopher's body was found near Seldovia Point. He was twelve years old. Tom has never been found, in spite of an extensive search.

Later in the week, at a memorial service at Elderberry Park, overlooking the Inlet, a large group of friends, colleagues and family met to express their and the community's loss. Christopher's ashes were scattered over Chinapoot Bay.

Dr. Feller was born in Boston, Mass., on 4 April, 1940. He went to the University of Virginia for both his undergraduate and medical education and received his M.D. in 1965. After internship at Cleveland General, he completed a year of Internal Medicine at the same institution.

The Feller family returned to Charlottesville, Virginia, where Tom was in a Neurology Residency from 1967 to 1970. It was during the first year of the residency that Christopher was born.

From 1967 to 1970 Tom was on active duty in the U.S. Navy.

Dr. Feller began his practice of Neurology in Anchorage in 1972 and was on the staff of Providence Hospital. As a physician, Tom was highly respected. His diagnoses were always all a neurologist's should be, elegant but relevant. He was unfailingly helpful and instructive but never condescending.

Patients were particularly benefited by his sensitive, direct and easygoing style. He could be appropriately blunt with those difficult patients who sometimes needed no more than to quit smoking and get more exercise. Someone with Bell's Palsy would come away from one of Tom's consultations feeling reassured and that he had "something interesting".

And yet those patients who are all too common in a neurologist's practice, those who ultimately received the very bad news of tumor or untreatable disease, also were sympathetically and effectively managed, and they and their families were helped by him through struggles that sometimes went on for years.

Tom was also an athlete, a runner. He ran his first marathon in May of 1979.

The family has asked that memorials be made to the Katchemak Bay Conservation Society, in Homer. Tom and his family loved the outdoors and the Katchemak Bay area especially, where they spent many beautiful days.

Kenneth Laufer, M.D.

ALASKA MEDICINE VOL. 21, 1979

SUBJECT INDEX

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Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

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Dosage: Not recommended for infants less than two months of age.

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Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
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40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

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Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
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Below 15	Use not recommended

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